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.
NMNM20965

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM129167

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

8. Well Name and No.
RDX FEDERAL COM 17 27H

2. Name of Operator
RKI EXPLORATION & PROD LLC
Contact: JOSH WALKER
E-Mail: josh.walker@wpxenergy.com

9. API Well No.
30-015-42743-00-X1

3a. Address
3500 ONE WILLIAMS CENTER MD 35
TULSA, OK 74172

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

10. Field and Pool, or Exploratory
~~UNDESIGNATED~~
BONE SPRING (97863)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 17 T26S R30E SWSE 0200FSL 1400FEL
32.020887 N Lat, 103.535797 W Lon

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 APD
	☐ 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: (Well # change only)

-Change well name from RDX Federal Com 17-27H to RDX Federal Com 17-41H.
-Change BHL from 330FNL, 1650'FEL to 230FNL, 1095FEL.

SUBJECT TO LIKE APPROVAL BY STATE

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

SEE ATTACHED FOR CONDITIONS OF APPROVAL

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 03 2016
RECEIVED

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

Electronic Submission #351925 verified by the BLM Well Information System
For RKI EXPLORATION & PROD LLC, sent to the Carlsbad
Committed to AFMSS for processing by CHRISTOPHER WALLS on 09/22/2016 (16CRW0111SE)

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

Signature (Electronic Submission) — Date 09/20/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CC Walls — Title Eng — Date 9/28/16

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Revisions to Operator-Submitted EC Data for Sundry Notice #351925

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM20965	NMNM20965
Agreement:	NMNM129167	NMNM129167 (NMNM129167)
Operator:	WPX ENERGY 3500 ONE WILLIAMS CENTER MD-35 TULSA, OK 71472 Ph: 539-573-0108	RKI EXPLORATION & PROD LLC 3500 ONE WILLIAMS CENTER MD 35 TULSA, OK 74172 Ph: 539-537-1196 Fx: 539 573 2922
Admin Contact:	JOSH WALKER REGULATORY SPECIALIST E-Mail: josh.walker@wpxenergy.com Ph: 539-573-0108	JOSH WALKER REGULATORY SPECIALIST E-Mail: josh.walker@wpxenergy.com Ph: 539-573-0108
Tech Contact:	JOSH WALKER REGULATORY SPECIALIST E-Mail: josh.walker@wpxenergy.com Ph: 539-573-0108	JOSH WALKER REGULATORY SPECIALIST E-Mail: josh.walker@wpxenergy.com Ph: 539-573-0108
Location: State: County:	 NM EDDY	 NM EDDY
Field/Pool:	UNDESIGNATED	UNDESIGNATED
Well/Facility:	RDX FEDERAL COM 17 27H Sec 17 T26S R30E SWSE 200FSL 1400FEL	RDX FEDERAL COM 17 27H Sec 17 T26S R30E SWSE 0200FSL 1400FEL 32.020887 N Lat, 103.535797 W Lon

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
30-015-42742	97863	~~UNDESIGNATED WOLFCAMP~~ Wildcat G-03 S263016K; Bone Spring

Property Code	Property Name	Well Number
313813	RDX FEDERAL COM 17	41H

OGRID No.	Operator Name	Elevation
246289	RKI EXPLORATION & PRODUCTION	3110'

Surface Location

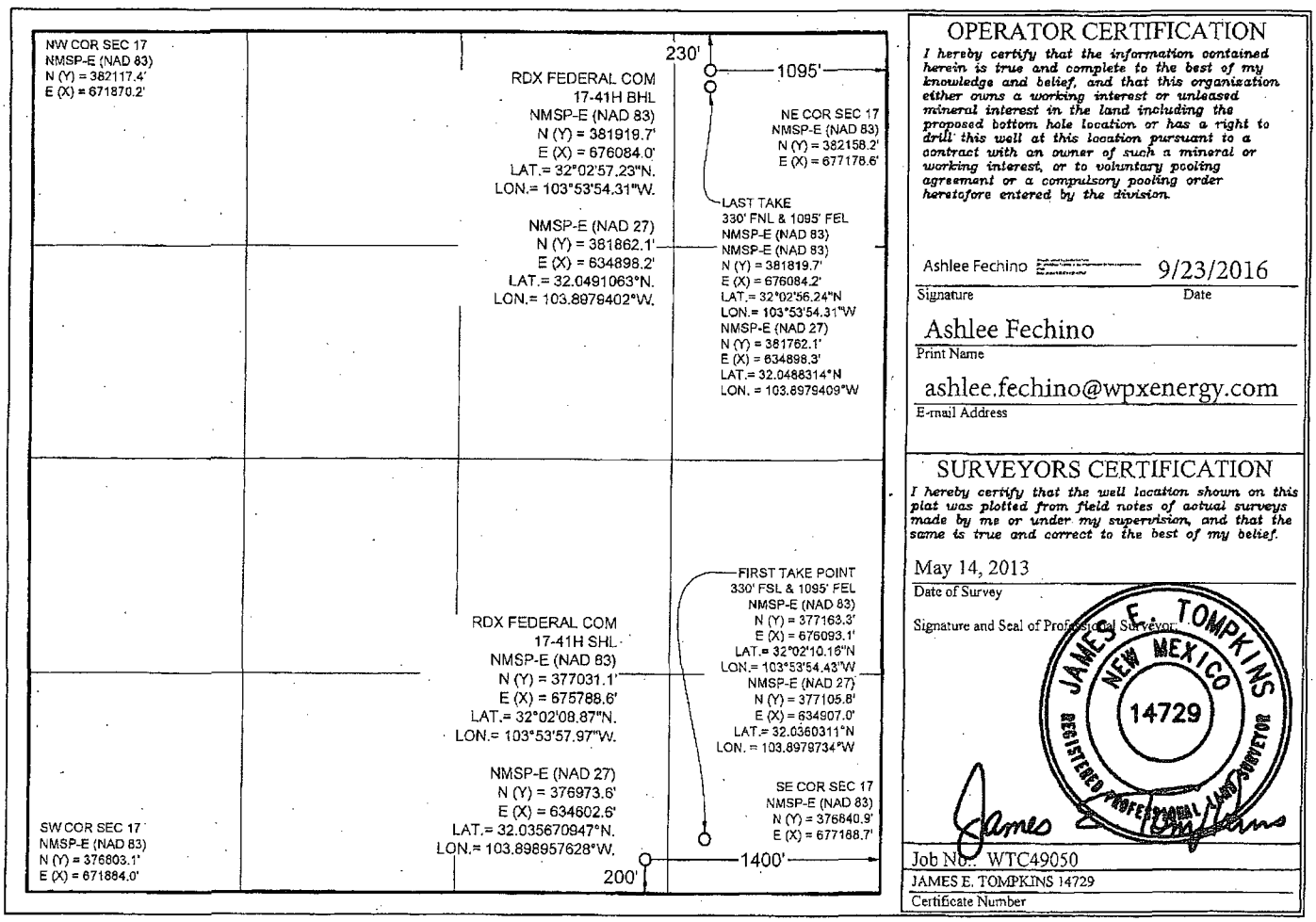
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	17	26 S	30 E		200	SOUTH	1400	EAST	EDDY

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
A	17	26 S	30 E		230	NORTH	1095	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
			sp. wt 75406

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.



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.

Ashlee Fechino — 9/23/2016
Signature — Date

Ashlee Fechino
Print Name

ashlee.fechino@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.

May 14, 2013
Date of Survey

Signature and Seal of Professional Surveyor:

JAMES E. TOMPKINS
NEW MEXICO
14729
REGISTERED PROFESSIONAL LAND SURVEYOR

Job No.: WTC49050
JAMES E. TOMPKINS 14729
Certificate Number

WPX Energy

Well RDX Fed Com 17-41H
Location Surface: 200 FSL 1,400 FEL Sec 17-26S-30E
Bottom Hole: 230 FNL 1,095 FEL Sec 17-26S-30E

County Eddy
State New Mexico

1) The elevation of the unprepared ground is 3,110 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 15,732 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 15,732 feet MD

5) Estimated tops:

	MD	TVD		BHP = .44 psi/ft x depth
Bell Canyon Sand (Base Salt)	3,555	3,555		1,564 psi
Cherry Canyon Sand	4,640	4,630		2,037 psi
Brushy Canyon Sand	5,737	5,701	Oil	2,508 psi
Bone Spring Lime	7,407	7,380	Oil	3,247 psi
1st Bone Spring Sand	8,223	8,256	Oil	3,633 psi
2nd Bone Spring Sand	9,034	9,007		3,963 psi
3rd Bone Spring Sand	10,198	10,171	Oil	4,475 psi
KOP	10,393	10,365		4,561 psi
Wolfcamp	10,582	10,555	Oil	4,644 psi
Landing Point (Wolfcamp)	11,243	10,914		- psi
TD	15,732	10,914		4,802 psi

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	1,035	13 3/8"	54.5#/J-55	ST&C	2.48	11.99	9.11
12 1/4"	0	3,555	9 5/8"	40#/J-55	LT&C	1.29	5.05	3.66
8 3/4"	0	11,243	7"	29#/HCP-110	BT&C	1.26	1.99	2.73
6 1/8"	10,393	15,732	4 1/2"	13.5#/HCP-110	CDC-HTC	2.22	1.24	6.15

Collapse	1.125
Burst	1.0
Tension	2.0

7) Cement program:

Surface	17 1/2" hole				
Pipe OD	13 3/8"				
Setting Depth	1,035 ft				
Annular Volume	0.69462 cf/ft				
Excess	1		100 %		
Lead	822 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	3,555 ft				
Annular Volume	0.31318 cf/ft		0.3627 cf/ft		
Excess	0.5		50 %		
Lead	625 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	11,243 ft				
Annular Volume	0.15033 cf/ft		0.1585 cf/ft	500 ft	
Excess	0.35		35 %		
Lead:	759 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: 3,055 ft

Production	6 1/8" hole				
Pipe OD (in OH)	4 1/2"				
Setting Depth	15,732 ft				
Annular Volume	0.0942				
Excess	0.50				
Lead:	403 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: 10,393 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~~ 2500 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. All Csg Must be tested
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	1,035	8.5 to 8.9	32 to 36	1 - 6	1 - 6	NC	Fresh Water
1,035	3,555	9.8 to 10.0	28 to 30	1 - 3	1 - 3	NC	Brine
3,555	11,243	8.9 to 9.1	28 to 36	1 - 3	1 - 3	NC	Cut Brine
11,243	15,732	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: RDX Federal COM 17
Well: 41H
Project: Eddy County, New Mexico (NAD 83)
Rig Name: Orion Phoenix

MS Energy Services.
WWW.MSENERGYSERVICES.COM

T G M

Azimuths to Grid North
True North: -0.23°
Magnetic North: 7.00°

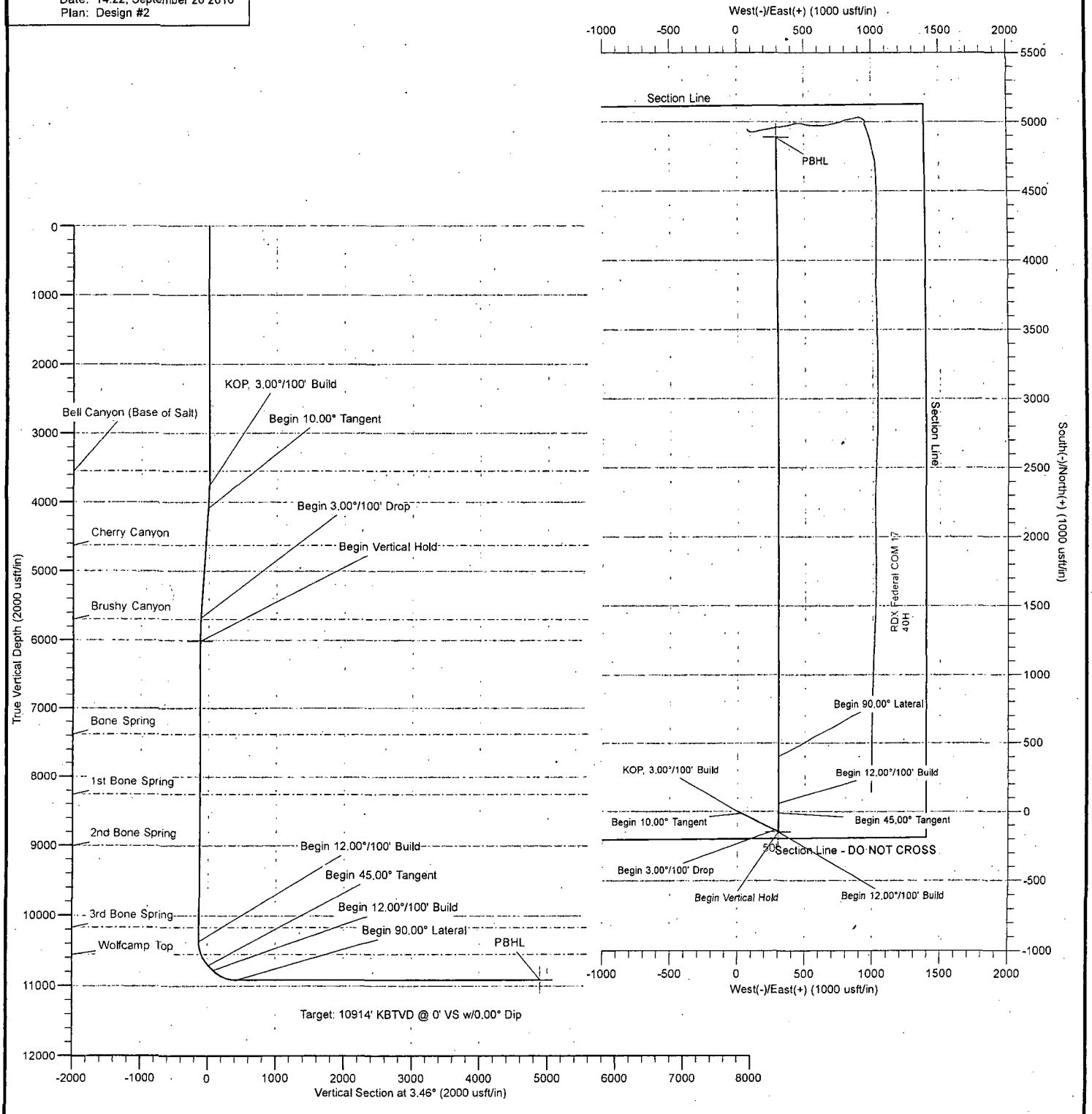
Magnetic Field
Strength: 47927.8snT
Dip Angle: 59.84°
Date: 10/15/2016
Model: BGGM2016

US State Plane 1983
New Mexico Eastern Zone

Created By: HLH
Date: 14:22, September 20 2016
Plan: Design #2

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
3755.00	0.00	0.00	3755.00	0.00	0.00	0.00	0.00	KOP, 3.00°/100' Build
4088.21	10.00	115.86	4086.53	-12.65	26.09	-11.05	28.99	Begin 10.00° Tangent
5706.73	10.00	115.86	5680.47	-135.18	278.92	-118.11	309.95	Begin 3.00°/100' Drop
6039.95	0.00	0.00	6012.00	-147.82	305.01	-129.15	338.94	Begin Vertical Hold
10393.77	0.00	0.00	10365.82	-147.82	305.01	-129.15	338.94	Begin 12.00°/100' Build
10768.77	45.00	359.89	10703.44	-7.98	304.74	10.42	478.79	Begin 45.00° Tangent
10868.77	45.00	359.89	10774.15	62.73	304.61	80.99	549.50	Begin 12.00°/100' Build
11243.77	90.00	359.89	10914.00	400.35	303.97	417.96	887.12	Begin 90.00° Lateral
15732.03	90.00	359.89	10914.00	4888.61	295.44	4897.53	5375.38	PBHL



WPXENERGY

WPX Energy

Eddy County, New Mexico (NAD 83)
RDX Federal COM 17
41H

Wellbore #1

Plan: Design #2

Standard Planning Report

20 September, 2016

MS Energy Services
WWW.MSENERGYSERVICES.COM

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 41H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site:	RDX Federal COM 17	**North Reference:**	Grid
Well:	41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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 41H

Well Position	**+N/-S**	377,031.10 usft	**Northing:**	377,031.10 usft	**Latitude:** 32° 2' 8.866 N
	+E/-W	675,788.60 usft	**Easting:**	675,788.60 usft	**Longitude:** 103° 53' 57.972 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:** 3,110.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	10/15/2016	7.23	59.84	47,928

Design Design #2

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	3.46

Plan Survey Tool Program **Date** 9/20/2016

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,732.03	Design #2 (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	
3,755.00	0.00	0.00	3,755.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,088.21	10.00	115.86	4,086.53	-12.65	26.09	3.00	3.00	0.00	115.86	
5,706.73	10.00	115.86	5,680.47	-135.18	278.92	0.00	0.00	0.00	0.00	
6,039.95	0.00	0.00	6,012.00	-147.82	305.01	3.00	-3.00	0.00	180.00	VP v2 - RDX Feder
10,393.77	0.00	0.00	10,365.82	-147.82	305.01	0.00	0.00	0.00	0.00	
10,768.77	45.00	359.89	10,703.44	-7.98	304.74	12.00	12.00	0.00	359.89	PBHL v2 - RDX Fe
10,868.77	45.00	359.89	10,774.15	62.73	304.61	0.00	0.00	0.00	0.00	
11,243.77	90.00	359.89	10,914.00	400.35	303.97	12.00	12.00	0.00	0.00	
15,732.03	90.00	359.89	10,914.00	4,888.61	295.44	0.00	0.00	0.00	0.00	PBHL v2 - RDX Fe

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 41H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site:	RDX Federal COM 17	**North Reference:**	Grid
Well:	41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,755.00	0.00	0.00	3,755.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 3.00°/100' Build									
3,800.00	1.35	115.86	3,800.00	-0.23	0.48	-0.20	3.00	3.00	0.00
3,900.00	4.35	115.86	3,899.86	-2.40	4.95	-2.10	3.00	3.00	0.00
4,000.00	7.35	115.86	3,999.33	-6.84	14.12	-5.98	3.00	3.00	0.00
4,088.21	10.00	115.86	4,086.53	-12.65	26.09	-11.05	3.00	3.00	0.00
Begin 10.00° Tangent									
4,100.00	10.00	115.86	4,098.13	-13.54	27.93	-11.83	0.00	0.00	0.00
4,200.00	10.00	115.86	4,196.62	-21.11	43.55	-18.44	0.00	0.00	0.00
4,300.00	10.00	115.86	4,295.10	-28.68	59.17	-25.06	0.00	0.00	0.00
4,400.00	10.00	115.86	4,393.58	-36.25	74.79	-31.67	0.00	0.00	0.00
4,500.00	10.00	115.86	4,492.06	-43.82	90.42	-38.29	0.00	0.00	0.00
4,600.00	10.00	115.86	4,590.54	-51.39	106.04	-44.90	0.00	0.00	0.00
4,700.00	10.00	115.86	4,689.02	-58.96	121.66	-51.52	0.00	0.00	0.00
4,800.00	10.00	115.86	4,787.51	-66.53	137.28	-58.13	0.00	0.00	0.00
4,900.00	10.00	115.86	4,885.99	-74.10	152.90	-64.74	0.00	0.00	0.00

Database:	EDM Conroe	Local Co-ordinate Reference:	Well 41H
Company:	WPX Energy	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site:	RDX Federal COM 17	North Reference:	Grid
Well:	41H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
5,000.00	10.00	115.86	4,984.47	-81.67	168.52	-71.36	0.00	0.00	0.00
5,100.00	10.00	115.86	5,082.95	-89.24	184.14	-77.97	0.00	0.00	0.00
5,200.00	10.00	115.86	5,181.43	-96.81	199.76	-84.59	0.00	0.00	0.00
5,300.00	10.00	115.86	5,279.92	-104.39	215.38	-91.20	0.00	0.00	0.00
5,400.00	10.00	115.86	5,378.40	-111.96	231.00	-97.82	0.00	0.00	0.00
5,500.00	10.00	115.86	5,476.88	-119.53	246.62	-104.43	0.00	0.00	0.00
5,600.00	10.00	115.86	5,575.36	-127.10	262.24	-111.05	0.00	0.00	0.00
5,706.73	10.00	115.86	5,680.47	-135.18	278.92	-118.11	0.00	0.00	0.00
Begin 3.00°/100' Drop									
5,800.00	7.20	115.86	5,772.68	-141.26	291.46	-123.42	3.00	-3.00	0.00
5,900.00	4.20	115.86	5,872.18	-145.59	300.40	-127.20	3.00	-3.00	0.00
6,000.00	1.20	115.86	5,972.06	-147.64	304.63	-129.00	3.00	-3.00	0.00
6,039.95	0.00	0.00	6,012.00	-147.82	305.01	-129.15	3.00	-3.00	0.00
Begin Vertical Hold									
6,100.00	0.00	0.00	6,072.05	-147.82	305.01	-129.15	0.00	0.00	0.00
6,200.00	0.00	0.00	6,172.05	-147.82	305.01	-129.15	0.00	0.00	0.00
6,300.00	0.00	0.00	6,272.05	-147.82	305.01	-129.15	0.00	0.00	0.00
6,400.00	0.00	0.00	6,372.05	-147.82	305.01	-129.15	0.00	0.00	0.00
6,500.00	0.00	0.00	6,472.05	-147.82	305.01	-129.15	0.00	0.00	0.00
6,600.00	0.00	0.00	6,572.05	-147.82	305.01	-129.15	0.00	0.00	0.00
6,700.00	0.00	0.00	6,672.05	-147.82	305.01	-129.15	0.00	0.00	0.00
6,800.00	0.00	0.00	6,772.05	-147.82	305.01	-129.15	0.00	0.00	0.00
6,900.00	0.00	0.00	6,872.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,000.00	0.00	0.00	6,972.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,100.00	0.00	0.00	7,072.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,200.00	0.00	0.00	7,172.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,300.00	0.00	0.00	7,272.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,400.00	0.00	0.00	7,372.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,500.00	0.00	0.00	7,472.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,600.00	0.00	0.00	7,572.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,700.00	0.00	0.00	7,672.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,800.00	0.00	0.00	7,772.05	-147.82	305.01	-129.15	0.00	0.00	0.00
7,900.00	0.00	0.00	7,872.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,000.00	0.00	0.00	7,972.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,100.00	0.00	0.00	8,072.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,200.00	0.00	0.00	8,172.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,300.00	0.00	0.00	8,272.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,400.00	0.00	0.00	8,372.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,500.00	0.00	0.00	8,472.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,600.00	0.00	0.00	8,572.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,700.00	0.00	0.00	8,672.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,800.00	0.00	0.00	8,772.05	-147.82	305.01	-129.15	0.00	0.00	0.00
8,900.00	0.00	0.00	8,872.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,000.00	0.00	0.00	8,972.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,100.00	0.00	0.00	9,072.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,200.00	0.00	0.00	9,172.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,300.00	0.00	0.00	9,272.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,400.00	0.00	0.00	9,372.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,500.00	0.00	0.00	9,472.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,600.00	0.00	0.00	9,572.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,700.00	0.00	0.00	9,672.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,800.00	0.00	0.00	9,772.05	-147.82	305.01	-129.15	0.00	0.00	0.00
9,900.00	0.00	0.00	9,872.05	-147.82	305.01	-129.15	0.00	0.00	0.00
10,000.00	0.00	0.00	9,972.05	-147.82	305.01	-129.15	0.00	0.00	0.00

Database:	EDM Conroe	Local Co-ordinate Reference:	Well 41H
Company:	WPX Energy	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site:	RDX Federal COM 17	North Reference:	Grid
Well:	41H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
10,100.00	0.00	0.00	10,072.05	-147.82	305.01	-129.15	0.00	0.00	0.00
10,200.00	0.00	0.00	10,172.05	-147.82	305.01	-129.15	0.00	0.00	0.00
10,300.00	0.00	0.00	10,272.05	-147.82	305.01	-129.15	0.00	0.00	0.00
10,393.77	0.00	0.00	10,365.82	-147.82	305.01	-129.15	0.00	0.00	0.00
Begin 12.00°/100' Build									
10,400.00	0.75	359.89	10,372.05	-147.78	305.01	-129.11	12.00	12.00	0.00
10,425.00	3.75	359.89	10,397.03	-146.80	305.01	-128.14	12.00	12.00	0.00
10,450.00	6.75	359.89	10,421.92	-144.52	305.00	-125.85	12.00	12.00	0.00
10,475.00	9.75	359.89	10,446.66	-140.93	305.00	-122.27	12.00	12.00	0.00
10,500.00	12.75	359.89	10,471.18	-136.05	304.99	-117.41	12.00	12.00	0.00
10,525.00	15.75	359.89	10,495.41	-129.90	304.97	-111.27	12.00	12.00	0.00
10,550.00	18.75	359.89	10,519.28	-122.49	304.96	-103.87	12.00	12.00	0.00
10,575.00	21.75	359.89	10,542.73	-113.84	304.94	-95.24	12.00	12.00	0.00
10,600.00	24.75	359.89	10,565.70	-103.97	304.92	-85.39	12.00	12.00	0.00
10,625.00	27.75	359.89	10,588.12	-92.92	304.90	-74.36	12.00	12.00	0.00
10,650.00	30.75	359.89	10,609.93	-80.70	304.88	-62.17	12.00	12.00	0.00
10,675.00	33.75	359.89	10,631.07	-67.37	304.86	-48.85	12.00	12.00	0.00
10,700.00	36.75	359.89	10,651.49	-52.94	304.83	-34.46	12.00	12.00	0.00
10,725.00	39.75	359.89	10,671.12	-37.47	304.80	-19.01	12.00	12.00	0.00
10,750.00	42.75	359.89	10,689.91	-20.98	304.77	-2.56	12.00	12.00	0.00
10,768.77	45.00	359.89	10,703.44	-7.98	304.74	10.42	12.00	12.00	0.00
Begin 45.00° Tangent									
10,800.00	45.00	359.89	10,725.52	14.11	304.70	32.46	0.00	0.00	0.00
10,868.77	45.00	359.89	10,774.15	62.73	304.61	80.99	0.00	0.00	0.00
Begin 12.00°/100' Build									
10,875.00	45.75	359.89	10,778.53	67.17	304.60	85.42	12.00	12.00	0.00
10,900.00	48.75	359.89	10,795.50	85.52	304.56	103.74	12.00	12.00	0.00
10,925.00	51.75	359.89	10,811.48	104.74	304.53	122.92	12.00	12.00	0.00
10,950.00	54.75	359.89	10,826.44	124.77	304.49	142.91	12.00	12.00	0.00
10,975.00	57.75	359.89	10,840.33	145.55	304.45	163.65	12.00	12.00	0.00
11,000.00	60.75	359.89	10,853.11	167.04	304.41	185.09	12.00	12.00	0.00
11,025.00	63.75	359.89	10,864.75	189.16	304.37	207.17	12.00	12.00	0.00
11,050.00	66.75	359.89	10,875.22	211.86	304.32	229.83	12.00	12.00	0.00
11,075.00	69.75	359.89	10,884.48	235.07	304.28	253.00	12.00	12.00	0.00
11,100.00	72.75	359.89	10,892.52	258.74	304.24	276.63	12.00	12.00	0.00
11,125.00	75.75	359.89	10,899.30	282.80	304.19	300.64	12.00	12.00	0.00
11,150.00	78.75	359.89	10,904.82	307.18	304.14	324.97	12.00	12.00	0.00
11,175.00	81.75	359.89	10,909.05	331.82	304.10	349.56	12.00	12.00	0.00
11,200.00	84.75	359.89	10,911.99	356.64	304.05	374.34	12.00	12.00	0.00
11,225.00	87.75	359.89	10,913.63	381.59	304.00	399.23	12.00	12.00	0.00
11,243.77	90.00	359.89	10,914.00	400.35	303.97	417.96	12.00	12.00	0.00
Begin 90.00° Lateral									
11,300.00	90.00	359.89	10,914.00	456.58	303.86	474.08	0.00	0.00	0.00
11,400.00	90.00	359.89	10,914.00	556.58	303.67	573.89	0.00	0.00	0.00
11,500.00	90.00	359.89	10,914.00	656.58	303.48	673.69	0.00	0.00	0.00
11,600.00	90.00	359.89	10,914.00	756.58	303.29	773.50	0.00	0.00	0.00
11,700.00	90.00	359.89	10,914.00	856.58	303.10	873.31	0.00	0.00	0.00
11,800.00	90.00	359.89	10,914.00	956.58	302.91	973.11	0.00	0.00	0.00
11,900.00	90.00	359.89	10,914.00	1,056.58	302.72	1,072.92	0.00	0.00	0.00
12,000.00	90.00	359.89	10,914.00	1,156.58	302.53	1,172.72	0.00	0.00	0.00
12,100.00	90.00	359.89	10,914.00	1,256.58	302.34	1,272.53	0.00	0.00	0.00
12,200.00	90.00	359.89	10,914.00	1,356.58	302.15	1,372.34	0.00	0.00	0.00
12,300.00	90.00	359.89	10,914.00	1,456.58	301.96	1,472.14	0.00	0.00	0.00

Database:	EDM Conroe	Local Co-ordinate Reference:	Well 41H
Company:	WPX Energy	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site:	RDX Federal COM 17	North Reference:	Grid
Well:	41H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
12,400.00	90.00	359.89	10,914.00	1,556.58	301.77	1,571.95	0.00	0.00	0.00
12,500.00	90.00	359.89	10,914.00	1,656.58	301.58	1,671.76	0.00	0.00	0.00
12,600.00	90.00	359.89	10,914.00	1,756.58	301.39	1,771.56	0.00	0.00	0.00
12,700.00	90.00	359.89	10,914.00	1,856.58	301.20	1,871.37	0.00	0.00	0.00
12,800.00	90.00	359.89	10,914.00	1,956.58	301.01	1,971.17	0.00	0.00	0.00
12,900.00	90.00	359.89	10,914.00	2,056.58	300.82	2,070.98	0.00	0.00	0.00
13,000.00	90.00	359.89	10,914.00	2,156.58	300.63	2,170.79	0.00	0.00	0.00
13,100.00	90.00	359.89	10,914.00	2,256.58	300.44	2,270.59	0.00	0.00	0.00
13,200.00	90.00	359.89	10,914.00	2,356.58	300.25	2,370.40	0.00	0.00	0.00
13,300.00	90.00	359.89	10,914.00	2,456.58	300.06	2,470.21	0.00	0.00	0.00
13,400.00	90.00	359.89	10,914.00	2,556.58	299.87	2,570.01	0.00	0.00	0.00
13,500.00	90.00	359.89	10,914.00	2,656.58	299.68	2,669.82	0.00	0.00	0.00
13,600.00	90.00	359.89	10,914.00	2,756.58	299.49	2,769.62	0.00	0.00	0.00
13,700.00	90.00	359.89	10,914.00	2,856.58	299.30	2,869.43	0.00	0.00	0.00
13,800.00	90.00	359.89	10,914.00	2,956.58	299.11	2,969.24	0.00	0.00	0.00
13,900.00	90.00	359.89	10,914.00	3,056.58	298.92	3,069.04	0.00	0.00	0.00
14,000.00	90.00	359.89	10,914.00	3,156.58	298.73	3,168.85	0.00	0.00	0.00
14,100.00	90.00	359.89	10,914.00	3,256.58	298.54	3,268.66	0.00	0.00	0.00
14,200.00	90.00	359.89	10,914.00	3,356.58	298.35	3,368.46	0.00	0.00	0.00
14,300.00	90.00	359.89	10,914.00	3,456.58	298.16	3,468.27	0.00	0.00	0.00
14,400.00	90.00	359.89	10,914.00	3,556.58	297.97	3,568.07	0.00	0.00	0.00
14,500.00	90.00	359.89	10,914.00	3,656.58	297.78	3,667.88	0.00	0.00	0.00
14,600.00	90.00	359.89	10,914.00	3,756.58	297.59	3,767.69	0.00	0.00	0.00
14,700.00	90.00	359.89	10,914.00	3,856.58	297.40	3,867.49	0.00	0.00	0.00
14,800.00	90.00	359.89	10,914.00	3,956.58	297.21	3,967.30	0.00	0.00	0.00
14,900.00	90.00	359.89	10,914.00	4,056.58	297.02	4,067.11	0.00	0.00	0.00
15,000.00	90.00	359.89	10,914.00	4,156.58	296.83	4,166.91	0.00	0.00	0.00
15,100.00	90.00	359.89	10,914.00	4,256.57	296.64	4,266.72	0.00	0.00	0.00
15,200.00	90.00	359.89	10,914.00	4,356.57	296.45	4,366.52	0.00	0.00	0.00
15,300.00	90.00	359.89	10,914.00	4,456.57	296.26	4,466.33	0.00	0.00	0.00
15,400.00	90.00	359.89	10,914.00	4,556.57	296.07	4,566.14	0.00	0.00	0.00
15,500.00	90.00	359.89	10,914.00	4,656.57	295.88	4,665.94	0.00	0.00	0.00
15,600.00	90.00	359.89	10,914.00	4,756.57	295.69	4,765.75	0.00	0.00	0.00
15,700.00	90.00	359.89	10,914.00	4,856.57	295.50	4,865.56	0.00	0.00	0.00
15,732.03	90.00	359.89	10,914.00	4,888.61	295.44	4,897.53	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 v2 - RDX Federal - plan hits target center - Point	0.00	0.00	6,012.00	-147.82	305.01	376,883.28	676,093.60	32° 2' 7.391 N	103° 53' 54.435 W
PBHL v2 - RDX Fedei - plan hits target center - Point	0.00	0.00	10,914.00	4,888.61	295.44	381,919.71	676,084.03	32° 2' 57.232 N	103° 53' 54.311 W

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 41H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site:	RDX Federal COM 17	**North Reference:**	Grid
Well:	41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,555.00	3,555.00	Bell Canyon (Base of Salt)		0.00	2.59
4,640.07	4,630.00	Cherry Canyon		0.00	2.59
5,727.56	5,701.00	Brushy Canyon		0.00	2.59
7,407.95	7,380.00	Bone Spring		0.00	2.59
8,283.95	8,256.00	1st Bone Spring		0.00	2.59
9,034.95	9,007.00	2nd Bone Spring		0.00	2.59
10,198.95	10,171.00	3rd Bone Spring		0.00	2.59
10,588.28	10,555.00	Wolfcamp Top		0.00	2.59

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
3,755.00	3,755.00	0.00	0.00	KOP, 3.00°/100' Build
4,088.21	4,086.53	-12.65	26.09	Begin 10.00° Tangent
5,706.73	5,680.47	-135.18	278.92	Begin 3.00°/100' Drop
6,039.95	6,012.00	-147.82	305.01	Begin Vertical Hold
10,393.77	10,365.82	-147.82	305.01	Begin 12.00°/100' Build
10,768.77	10,703.44	-7.98	304.74	Begin 45.00° Tangent
10,868.77	10,774.15	62.73	304.61	Begin 12.00°/100' Build
11,243.77	10,914.00	400.35	303.97	Begin 90.00° Lateral
15,732.03	10,914.00	4,888.61	295.44	PBHL

WPXENERGY

WPX Energy

Eddy County, New Mexico (NAD 83)
RDX Federal COM 17
41H

Wellbore #1
Design #2

Anticollision Report

20 September, 2016

MS Energy Services.
WWW.MSENERGYSERVICES.COM

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Reference Design #2

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** 9/20/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,732.03	Design #2 (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
RDX Federal 17						
12H - Wellbore #1 - Surveys	7,698.29	12,028.00	3,598.30	3,491.82	33.795	CC
12H - Wellbore #1 - Surveys	7,700.00	12,028.00	3,598.30	3,491.81	33.793	ES
12H - Wellbore #1 - Surveys	7,900.00	12,028.00	3,603.94	3,496.94	33.680	SF
16H - Wellbore #1 - Surveys	14,749.54	10,953.44	3,543.12	3,430.31	31.407	CC
16H - Wellbore #1 - Surveys	14,800.00	10,921.90	3,543.33	3,430.06	31.281	ES
16H - Wellbore #1 - Surveys	15,732.03	10,561.00	3,633.94	3,511.56	29.692	SF
25H - Wellbore #1 - Surveys	7,989.26	12,542.00	3,256.93	3,144.69	29.017	CC
25H - Wellbore #1 - Surveys	8,000.00	12,542.00	3,256.95	3,144.67	29.009	ES
25H - Wellbore #1 - Surveys	8,200.00	12,542.00	3,263.74	3,151.00	28.950	SF
35H - Wellbore #1 - Design #1	15,732.03	10,925.49	3,886.56	3,758.46	30.340	CC, ES, SF
RDX Federal COM 17						
40H - Wellbore #1 - Surveys	11,000.00	15,428.80	691.27	564.74	5.464	SF
40H - Wellbore #1 - Surveys	11,025.00	15,412.46	690.70	564.31	5.465	ES
40H - Wellbore #1 - Surveys	11,046.02	15,399.61	690.55	564.32	5.470	CC

Offset Design RDX Federal 17 - 12H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-GYRO-NS, 7060-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	-33.40	4,941.50	-3,258.10	5,919.09				
100.00	100.00	37.56	37.56	0.13	0.06	-33.40	4,941.53	-3,258.15	5,919.00	5,918.81	0.19	N/A	
200.00	200.00	110.19	110.19	0.49	0.18	-33.40	4,941.78	-3,258.53	5,919.56	5,918.89	0.67	8,793.571	
300.00	300.00	226.24	226.23	0.85	0.59	-33.40	4,942.16	-3,259.24	5,920.16	5,918.73	1.44	4,116.880	
400.00	400.00	324.86	324.85	1.21	0.93	-33.41	4,942.38	-3,259.70	5,920.61	5,918.47	2.14	2,764.323	
500.00	500.00	406.36	406.35	1.57	1.22	-33.41	4,942.73	-3,260.17	5,921.29	5,918.50	2.79	2,125.539	
600.00	600.00	504.53	504.52	1.93	1.56	-33.41	4,943.34	-3,260.75	5,922.13	5,918.64	3.49	1,697.687	
700.00	700.00	597.77	597.75	2.29	1.89	-33.41	4,943.99	-3,261.30	5,923.04	5,918.86	4.17	1,419.145	
800.00	800.00	701.15	701.13	2.64	2.25	-33.41	4,944.72	-3,261.95	5,923.98	5,919.08	4.89	1,210.308	
900.00	900.00	815.89	815.87	3.00	2.65	-33.41	4,945.45	-3,262.51	5,924.77	5,919.12	5.66	1,047.640	
1,000.00	1,000.00	939.44	939.41	3.36	3.09	-33.41	4,945.95	-3,262.76	5,925.22	5,918.78	6.45	919.133	
1,100.00	1,100.00	1,045.01	1,044.99	3.72	3.46	-33.41	4,945.95	-3,263.08	5,925.38	5,918.21	7.17	825.973	
1,200.00	1,200.00	1,145.84	1,145.82	4.08	3.81	-33.42	4,945.94	-3,263.46	5,925.59	5,917.71	7.88	751.568	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	41H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design — RDX Federal 17 - 12H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-GYRO-NS, 7060-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
1,300.00	1,300.00	1,255.72	1,255.69	4.44	4.19	-33.42	4,945.90	-3,263.64	5,925.64	5,917.02	8.63	686.960	
1,400.00	1,400.00	1,360.35	1,360.33	4.79	4.56	-33.42	4,945.69	-3,263.85	5,925.59	5,916.24	9.35	633.863	
1,500.00	1,500.00	1,458.04	1,458.01	5.15	4.90	-33.43	4,945.43	-3,264.08	5,925.50	5,915.45	10.05	589.796	
1,547.33	1,547.33	1,502.43	1,502.40	5.32	5.05	-33.43	4,945.36	-3,264.17	5,925.49	5,915.12	10.37	571.358	
1,600.00	1,600.00	1,547.81	1,547.78	5.51	5.21	-33.43	4,945.33	-3,264.27	5,925.52	5,914.80	10.72	552.851	
1,700.00	1,700.00	1,640.98	1,640.96	5.87	5.54	-33.43	4,945.33	-3,264.63	5,925.73	5,914.33	11.40	519.710	
1,800.00	1,800.00	1,746.36	1,746.33	6.23	5.91	-33.43	4,945.29	-3,265.08	5,925.93	5,913.81	12.13	488.590	
1,900.00	1,900.00	1,851.92	1,851.89	6.59	6.28	-33.44	4,945.17	-3,265.42	5,926.02	5,913.17	12.86	460.970	
2,000.00	2,000.00	1,962.78	1,962.74	6.95	6.67	-33.44	4,944.81	-3,265.96	5,926.01	5,912.41	13.60	435.722	
2,100.00	2,100.00	2,059.55	2,059.51	7.30	7.00	-33.45	4,944.28	-3,266.47	5,925.86	5,911.56	14.30	414.505	
2,200.00	2,200.00	2,176.57	2,176.53	7.66	7.41	-33.46	4,943.66	-3,267.15	5,925.75	5,910.69	15.06	393.415	
2,300.00	2,300.00	2,329.09	2,329.04	8.02	7.95	-33.47	4,941.89	-3,267.55	5,924.92	5,908.97	15.95	371.455	
2,400.00	2,400.00	2,447.06	2,446.99	8.38	8.36	-33.48	4,939.85	-3,267.55	5,923.46	5,906.75	16.72	354.300	
2,500.00	2,500.00	2,540.51	2,540.43	8.74	8.68	-33.49	4,938.17	-3,267.47	5,921.92	5,904.52	17.40	340.286	
2,600.00	2,600.00	2,626.59	2,626.50	9.10	8.98	-33.50	4,936.82	-3,267.47	5,920.62	5,902.56	18.06	327.803	
2,700.00	2,700.00	2,737.17	2,737.07	9.45	9.37	-33.51	4,935.33	-3,267.32	5,919.43	5,900.62	18.80	314.784	
2,800.00	2,800.00	12,028.00	7,625.34	9.81	79.99	-84.97	287.63	-3,266.84	5,871.56	5,811.55	60.01	97.839	
2,900.00	2,900.00	12,028.00	7,625.34	10.17	79.99	-84.97	287.63	-3,266.84	5,788.88	5,728.17	60.71	95.347	
3,000.00	3,000.00	12,028.00	7,625.34	10.53	79.99	-84.97	287.63	-3,266.84	5,706.76	5,645.32	61.43	92.892	
3,100.00	3,100.00	12,028.00	7,625.34	10.89	79.99	-84.97	287.63	-3,266.84	5,625.21	5,563.04	62.17	90.475	
3,200.00	3,200.00	12,028.00	7,625.34	11.25	79.99	-84.97	287.63	-3,266.84	5,544.27	5,481.33	62.94	88.095	
3,300.00	3,300.00	12,028.00	7,625.34	11.61	79.99	-84.97	287.63	-3,266.84	5,463.96	5,400.24	63.72	85.754	
3,400.00	3,400.00	12,028.00	7,625.34	11.96	79.99	-84.97	287.63	-3,266.84	5,384.31	5,319.79	64.52	83.453	
3,500.00	3,500.00	12,028.00	7,625.34	12.32	79.99	-84.97	287.63	-3,266.84	5,305.35	5,240.01	65.34	81.192	
3,600.00	3,600.00	12,028.00	7,625.34	12.68	79.99	-84.97	287.63	-3,266.84	5,227.11	5,160.92	66.19	78.973	
3,700.00	3,700.00	12,028.00	7,625.34	13.04	79.99	-84.97	287.63	-3,266.84	5,149.62	5,082.56	67.06	76.796	
3,755.00	3,755.00	12,028.00	7,625.34	13.24	79.99	-84.97	287.63	-3,266.84	5,107.34	5,039.79	67.54	75.617	
3,800.00	3,800.00	12,028.00	7,625.34	13.39	79.99	-84.97	287.63	-3,266.84	5,073.24	5,005.30	67.94	74.669	
3,900.00	3,899.86	12,028.00	7,625.34	13.73	79.99	-84.93	287.63	-3,266.84	5,000.53	4,931.65	68.87	72.607	
4,000.00	3,999.33	12,028.00	7,625.34	14.06	79.99	-84.87	287.63	-3,266.84	4,932.32	4,862.46	69.86	70.604	
4,088.21	4,086.53	12,028.00	7,625.34	14.36	79.99	-84.79	287.63	-3,266.84	4,876.20	4,805.42	70.78	68.893	
4,100.00	4,098.13	12,028.00	7,625.34	14.40	79.99	-84.78	287.63	-3,266.84	4,868.97	4,798.07	70.90	68.672	
4,200.00	4,196.62	12,028.00	7,625.34	14.75	79.99	-84.67	287.63	-3,266.84	4,808.41	4,736.41	72.00	66.787	
4,300.00	4,295.10	12,028.00	7,625.34	15.10	79.99	-84.57	287.63	-3,266.84	4,749.18	4,676.07	73.11	64.959	
4,400.00	4,393.58	12,028.00	7,625.34	15.46	79.99	-84.46	287.63	-3,266.84	4,691.33	4,617.09	74.24	63.188	
4,500.00	4,492.06	12,028.00	7,625.34	15.83	79.99	-84.36	287.63	-3,266.84	4,634.92	4,559.53	75.39	61.476	
4,600.00	4,590.54	12,028.00	7,625.34	16.20	79.99	-84.26	287.63	-3,266.84	4,580.00	4,503.44	76.56	59.823	
4,700.00	4,689.02	12,028.00	7,625.34	16.57	79.99	-84.16	287.63	-3,266.84	4,526.62	4,448.88	77.74	58.228	
4,800.00	4,787.51	12,028.00	7,625.34	16.95	79.99	-84.06	287.63	-3,266.84	4,474.84	4,395.91	78.93	56.693	
4,900.00	4,885.99	12,028.00	7,625.34	17.33	79.99	-83.96	287.63	-3,266.84	4,424.71	4,344.58	80.13	55.216	
5,000.00	4,984.47	12,028.00	7,625.34	17.71	79.99	-83.86	287.63	-3,266.84	4,376.30	4,294.95	81.35	53.799	
5,100.00	5,082.95	12,028.00	7,625.34	18.10	79.99	-83.77	287.63	-3,266.84	4,329.65	4,247.09	82.56	52.441	
5,200.00	5,181.43	12,028.00	7,625.34	18.49	79.99	-83.67	287.63	-3,266.84	4,284.83	4,201.05	83.78	51.141	
5,300.00	5,279.92	12,028.00	7,625.34	18.88	79.99	-83.58	287.63	-3,266.84	4,241.90	4,156.89	85.01	49.901	
5,400.00	5,378.40	12,028.00	7,625.34	19.28	79.99	-83.48	287.63	-3,266.84	4,200.90	4,114.68	86.23	48.720	
5,500.00	5,476.88	12,028.00	7,625.34	19.68	79.99	-83.39	287.63	-3,266.84	4,161.91	4,074.47	87.44	47.597	
5,600.00	5,575.36	12,028.00	7,625.34	20.08	79.99	-83.30	287.63	-3,266.84	4,124.97	4,036.32	88.65	46.532	
5,700.00	5,673.84	12,028.00	7,625.34	20.48	79.99	-83.21	287.63	-3,266.84	4,090.14	4,000.30	89.84	45.525	
5,706.73	5,680.47	12,028.00	7,625.34	20.51	79.99	-83.20	287.63	-3,266.84	4,087.88	3,997.95	89.92	45.459	
5,800.00	5,772.68	12,028.00	7,625.34	20.88	79.99	-83.13	287.63	-3,266.84	4,055.44	3,964.42	91.02	44.556	
5,900.00	5,872.18	12,028.00	7,625.34	21.25	79.99	-83.08	287.63	-3,266.84	4,018.24	3,926.08	92.16	43.601	
6,000.00	5,972.06	12,028.00	7,625.34	21.61	79.99	-83.05	287.63	-3,266.84	3,978.57	3,885.31	93.26	42.660	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 12H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-GYRO-NS, 7060-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
6,039.95	6,012.00	12,028.00	7,625.34	21.75	79.99	-83.05	287.63	-3,266.84	3,962.05	3,868.35	93.69	42.287	
6,100.00	6,072.05	12,028.00	7,625.34	21.95	79.99	-83.05	287.63	-3,266.84	3,937.29	3,842.96	94.33	41.739	
6,200.00	6,172.05	12,028.00	7,625.34	22.30	79.99	-83.05	287.63	-3,266.84	3,897.77	3,802.39	95.38	40.866	
6,300.00	6,272.05	12,028.00	7,625.34	22.64	79.99	-83.05	287.63	-3,266.84	3,860.43	3,764.03	96.40	40.044	
6,400.00	6,372.05	12,028.00	7,625.34	22.99	79.99	-83.05	287.63	-3,266.84	3,825.35	3,727.94	97.40	39.273	
6,500.00	6,472.05	12,028.00	7,625.34	23.33	79.99	-83.05	287.63	-3,266.84	3,792.57	3,694.20	98.38	38.552	
6,600.00	6,572.05	12,028.00	7,625.34	23.68	79.99	-83.05	287.63	-3,266.84	3,762.18	3,662.86	99.32	37.881	
6,700.00	6,672.05	12,028.00	7,625.34	24.02	79.99	-83.05	287.63	-3,266.84	3,734.21	3,633.99	100.22	37.261	
6,800.00	6,772.05	12,028.00	7,625.34	24.37	79.99	-83.05	287.63	-3,266.84	3,708.73	3,607.65	101.08	36.691	
6,900.00	6,872.05	12,028.00	7,625.34	24.71	79.99	-83.05	287.63	-3,266.84	3,685.78	3,583.88	101.90	36.171	
7,000.00	6,972.05	12,028.00	7,625.34	25.06	79.99	-83.05	287.63	-3,266.84	3,665.42	3,562.76	102.67	35.701	
7,100.00	7,072.05	12,028.00	7,625.34	25.41	79.99	-83.05	287.63	-3,266.84	3,647.69	3,544.31	103.39	35.282	
7,200.00	7,172.05	12,028.00	7,625.34	25.76	79.99	-83.05	287.63	-3,266.84	3,632.63	3,528.58	104.05	34.911	
7,300.00	7,272.05	12,028.00	7,625.34	26.10	79.99	-83.05	287.63	-3,266.84	3,620.27	3,515.61	104.66	34.590	
7,400.00	7,372.05	12,028.00	7,625.34	26.45	79.99	-83.05	287.63	-3,266.84	3,610.64	3,505.43	105.21	34.318	
7,500.00	7,472.05	12,028.00	7,625.34	26.80	79.99	-83.05	287.63	-3,266.84	3,603.75	3,498.06	105.70	34.095	
7,600.00	7,572.05	12,028.00	7,625.34	27.15	79.99	-83.05	287.63	-3,266.84	3,599.64	3,493.52	106.12	33.920	
7,698.29	7,670.34	12,028.00	7,625.34	27.49	79.99	-83.05	287.63	-3,266.84	3,598.30	3,491.82	106.48	33.795	CC
7,700.00	7,672.05	12,028.00	7,625.34	27.50	79.99	-83.05	287.63	-3,266.84	3,598.30	3,491.81	106.48	33.793	ES
7,800.00	7,772.05	12,028.00	7,625.34	27.85	79.99	-83.05	287.63	-3,266.84	3,599.73	3,492.96	106.78	33.713	
7,900.00	7,872.05	12,028.00	7,625.34	28.19	79.99	-83.05	287.63	-3,266.84	3,603.94	3,496.94	107.01	33.680	SF
8,000.00	7,972.05	12,028.00	7,625.34	28.54	79.99	-83.05	287.63	-3,266.84	3,610.92	3,503.75	107.17	33.693	
8,100.00	8,072.05	12,028.00	7,625.34	28.89	79.99	-83.05	287.63	-3,266.84	3,620.65	3,513.38	107.27	33.751	
8,200.00	8,172.05	12,028.00	7,625.34	29.24	79.99	-83.05	287.63	-3,266.84	3,633.10	3,525.79	107.31	33.855	
8,300.00	8,272.05	12,028.00	7,625.34	29.59	79.99	-83.05	287.63	-3,266.84	3,648.26	3,540.97	107.29	34.003	
8,400.00	8,372.05	12,028.00	7,625.34	29.94	79.99	-83.05	287.63	-3,266.84	3,666.08	3,558.87	107.21	34.195	
8,500.00	8,472.05	12,028.00	7,625.34	30.30	79.99	-83.05	287.63	-3,266.84	3,686.53	3,579.45	107.07	34.429	
8,600.00	8,572.05	12,028.00	7,625.34	30.65	79.99	-83.05	287.63	-3,266.84	3,709.56	3,602.67	106.89	34.706	
8,700.00	8,672.05	12,028.00	7,625.34	31.00	79.99	-83.05	287.63	-3,266.84	3,735.12	3,628.48	106.65	35.024	
8,800.00	8,772.05	12,028.00	7,625.34	31.35	79.99	-83.05	287.63	-3,266.84	3,763.18	3,656.82	106.36	35.382	
8,900.00	8,872.05	12,028.00	7,625.34	31.70	79.99	-83.05	287.63	-3,266.84	3,793.66	3,687.63	106.03	35.779	
9,000.00	8,972.05	12,028.00	7,625.34	32.05	79.99	-83.05	287.63	-3,266.84	3,826.51	3,720.85	105.66	36.215	
9,100.00	9,072.05	12,028.00	7,625.34	32.40	79.99	-83.05	287.63	-3,266.84	3,861.67	3,756.42	105.26	36.688	
9,200.00	9,172.05	12,028.00	7,625.34	32.75	79.99	-83.05	287.63	-3,266.84	3,899.09	3,794.27	104.82	37.198	
9,300.00	9,272.05	12,028.00	7,625.34	33.11	79.99	-83.05	287.63	-3,266.84	3,938.68	3,834.33	104.35	37.744	
9,400.00	9,372.05	12,028.00	7,625.34	33.46	79.99	-83.05	287.63	-3,266.84	3,980.40	3,876.53	103.86	38.323	
9,500.00	9,472.05	12,028.00	7,625.34	33.81	79.99	-83.05	287.63	-3,266.84	4,024.16	3,920.81	103.35	38.936	
9,600.00	9,572.05	12,028.00	7,625.34	34.16	79.99	-83.05	287.63	-3,266.84	4,069.92	3,967.09	102.82	39.581	
9,700.00	9,672.05	12,028.00	7,625.34	34.51	79.99	-83.05	287.63	-3,266.84	4,117.59	4,015.31	102.28	40.258	
9,800.00	9,772.05	12,028.00	7,625.34	34.87	79.99	-83.05	287.63	-3,266.84	4,167.12	4,065.40	101.73	40.964	
9,900.00	9,872.05	12,028.00	7,625.34	35.22	79.99	-83.05	287.63	-3,266.84	4,218.44	4,117.28	101.17	41.698	
10,000.00	9,972.05	12,028.00	7,625.34	35.57	79.99	-83.05	287.63	-3,266.84	4,271.49	4,170.89	100.60	42.461	
10,100.00	10,072.05	12,028.00	7,625.34	35.93	79.99	-83.05	287.63	-3,266.84	4,326.19	4,226.16	100.03	43.249	
10,200.00	10,172.05	12,028.00	7,625.34	36.28	79.99	-83.05	287.63	-3,266.84	4,382.50	4,283.04	99.46	44.063	
10,300.00	10,272.05	12,028.00	7,625.34	36.63	79.99	-83.05	287.63	-3,266.84	4,440.34	4,341.45	98.89	44.900	
10,393.77	10,365.82	12,028.00	7,625.34	36.96	79.99	-83.05	287.63	-3,266.84	4,495.93	4,397.56	98.37	45.706	
10,400.00	10,372.05	12,028.00	7,625.34	36.98	79.99	-83.05	287.63	-3,266.84	4,499.66	4,401.33	98.33	45.761	
10,425.00	10,397.03	12,028.00	7,625.34	37.07	79.99	-83.07	287.63	-3,266.84	4,514.61	4,416.41	98.19	45.978	
10,450.00	10,421.92	12,028.00	7,625.34	37.16	79.99	-83.10	287.63	-3,266.84	4,529.46	4,431.41	98.05	46.194	
10,475.00	10,446.66	12,028.00	7,625.34	37.24	79.99	-83.16	287.63	-3,266.84	4,544.19	4,446.27	97.92	46.409	
10,500.00	10,471.18	12,028.00	7,625.34	37.33	79.99	-83.24	287.63	-3,266.84	4,558.74	4,460.96	97.78	46.622	
10,525.00	10,495.41	12,028.00	7,625.34	37.41	79.99	-83.33	287.63	-3,266.84	4,573.10	4,475.45	97.65	46.833	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 12H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-GYRO-NS, 7060-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
10,550.00	10,519.28	12,028.00	7,625.34	37.48	79.99	-83.45	287.63	-3,266.84	4,587.20	4,489.69	97.52	47.040	
10,575.00	10,542.73	12,028.00	7,625.34	37.56	79.99	-83.59	287.63	-3,266.84	4,601.03	4,503.64	97.39	47.244	
10,600.00	10,565.70	12,028.00	7,625.34	37.63	79.99	-83.74	287.63	-3,266.84	4,614.54	4,517.28	97.26	47.443	
10,625.00	10,588.12	12,028.00	7,625.34	37.70	79.99	-83.92	287.63	-3,266.84	4,627.70	4,530.56	97.14	47.638	
10,650.00	10,609.93	12,028.00	7,625.34	37.76	79.99	-84.11	287.63	-3,266.84	4,640.48	4,543.45	97.03	47.827	
10,675.00	10,631.07	12,028.00	7,625.34	37.83	79.99	-84.32	287.63	-3,266.84	4,652.85	4,555.93	96.91	48.010	
10,700.00	10,651.49	12,028.00	7,625.34	37.88	79.99	-84.55	287.63	-3,266.84	4,664.77	4,567.96	96.81	48.187	
10,725.00	10,671.12	12,028.00	7,625.34	37.94	79.99	-84.80	287.63	-3,266.84	4,676.21	4,579.51	96.70	48.356	
10,750.00	10,689.91	12,028.00	7,625.34	37.98	79.99	-85.06	287.63	-3,266.84	4,687.16	4,590.55	96.61	48.518	
10,768.77	10,703.44	12,028.00	7,625.34	38.02	79.99	-85.27	287.63	-3,266.84	4,695.03	4,598.49	96.54	48.635	
10,800.00	10,725.52	12,028.00	7,625.34	38.07	79.99	-85.62	287.63	-3,266.84	4,707.96	4,611.53	96.43	48.825	
10,868.77	10,774.15	12,028.00	7,625.34	38.18	79.99	-86.40	287.63	-3,266.84	4,737.03	4,640.84	96.19	49.246	
10,875.00	10,778.53	12,028.00	7,625.34	38.19	79.99	-86.47	287.63	-3,266.84	4,739.69	4,643.52	96.17	49.285	
10,900.00	10,795.50	12,028.00	7,625.34	38.24	79.99	-86.76	287.63	-3,266.84	4,749.99	4,653.90	96.09	49.433	
10,925.00	10,811.48	12,028.00	7,625.34	38.27	79.99	-87.07	287.63	-3,266.84	4,759.72	4,663.70	96.01	49.573	
10,950.00	10,826.44	12,028.00	7,625.34	38.31	79.99	-87.39	287.63	-3,266.84	4,768.85	4,672.90	95.95	49.703	
10,975.00	10,840.33	12,028.00	7,625.34	38.34	79.99	-87.72	287.63	-3,266.84	4,777.36	4,681.47	95.89	49.823	
11,000.00	10,853.11	12,028.00	7,625.34	38.37	79.99	-88.07	287.63	-3,266.84	4,785.23	4,689.39	95.83	49.932	
11,025.00	10,864.75	12,028.00	7,625.34	38.41	79.99	-88.42	287.63	-3,266.84	4,792.44	4,696.65	95.79	50.031	
11,050.00	10,875.22	12,028.00	7,625.34	38.47	79.99	-88.78	287.63	-3,266.84	4,798.98	4,703.22	95.75	50.118	
11,075.00	10,884.48	12,028.00	7,625.34	38.54	79.99	-89.16	287.63	-3,266.84	4,804.83	4,709.10	95.73	50.193	
11,100.00	10,892.52	12,028.00	7,625.34	38.61	79.99	-89.54	287.63	-3,266.84	4,809.97	4,714.26	95.71	50.257	
11,125.00	10,899.30	12,024.81	7,625.32	38.69	79.94	-89.87	290.83	-3,266.82	4,814.40	4,718.74	95.66	50.329	
11,150.00	10,904.82	12,000.46	7,625.20	38.76	79.56	-89.87	315.18	-3,266.65	4,818.03	4,722.68	95.35	50.531	
11,175.00	10,909.05	11,789.60	7,627.49	38.83	76.26	-86.88	525.94	-3,262.75	4,820.32	4,727.65	92.67	52.016	
11,200.00	10,911.99	11,780.35	7,627.76	38.91	76.12	-87.13	535.18	-3,262.51	4,821.30	4,728.71	92.58	52.076	
11,225.00	10,913.63	11,771.08	7,628.01	38.98	75.98	-87.39	544.45	-3,262.30	4,821.48	4,728.97	92.51	52.121	
11,243.77	10,914.00	11,764.11	7,628.19	39.04	75.87	-87.57	551.42	-3,262.16	4,821.09	4,728.63	92.45	52.146	
11,300.00	10,914.00	11,730.00	7,628.95	39.22	75.34	-87.93	585.51	-3,261.68	4,819.50	4,727.35	92.15	52.301	
11,400.00	10,914.00	11,685.31	7,629.76	39.58	74.64	-88.82	630.20	-3,261.36	4,817.42	4,725.57	91.85	52.449	
11,500.00	10,914.00	11,446.00	7,639.67	40.01	70.93	-86.58	869.24	-3,259.13	4,813.11	4,723.90	89.20	53.956	
11,600.00	10,914.00	11,392.37	7,641.80	40.50	70.10	-87.33	922.81	-3,257.66	4,808.62	4,719.71	88.91	54.085	
11,700.00	10,914.00	11,700.00	7,642.37	41.04	74.83	-88.37	957.67	-3,256.97	4,805.77	4,712.61	93.16	51.585	
11,800.00	10,914.00	11,225.12	7,642.94	41.65	67.53	-87.85	1,089.99	-3,253.47	4,803.44	4,715.77	87.67	54.788	
11,900.00	10,914.00	11,065.00	7,643.15	42.31	65.09	-86.88	1,249.95	-3,246.41	4,799.98	4,713.84	86.14	55.722	
12,000.00	10,914.00	11,017.23	7,643.40	43.02	64.36	-87.72	1,297.67	-3,244.29	4,796.28	4,710.19	86.09	55.711	
12,100.00	10,914.00	12,100.00	7,643.66	43.78	80.82	-88.55	1,346.09	-3,243.06	4,793.82	4,693.80	100.02	47.929	
12,200.00	10,914.00	10,874.00	7,645.56	44.60	62.19	-88.64	1,440.86	-3,242.40	4,791.82	4,706.27	85.55	56.013	
12,300.00	10,914.00	10,830.80	7,646.63	45.45	61.53	-89.56	1,484.05	-3,242.56	4,790.41	4,704.72	85.69	55.905	
12,352.94	10,914.00	10,812.06	7,646.83	45.93	61.25	-90.11	1,502.78	-3,242.69	4,790.22	4,704.39	85.83	55.813	
12,400.00	10,914.00	10,780.00	7,646.79	46.35	60.76	-90.35	1,534.85	-3,242.98	4,790.44	4,704.68	85.76	55.858	
12,500.00	10,914.00	10,698.54	7,646.22	47.29	59.53	-90.65	1,616.30	-3,243.67	4,791.31	4,705.82	85.49	56.044	
12,600.00	10,914.00	10,535.72	7,647.94	48.27	57.09	-89.64	1,779.09	-3,245.70	4,791.41	4,707.10	84.31	56.828	
12,670.97	10,914.00	10,494.00	7,648.37	48.99	56.46	-90.11	1,820.81	-3,245.72	4,790.98	4,706.61	84.37	56.785	
12,700.00	10,914.00	10,494.00	7,648.37	49.28	56.46	-90.58	1,820.81	-3,245.72	4,791.07	4,706.48	84.60	56.634	
12,800.00	10,914.00	10,447.77	7,648.34	50.33	55.78	-91.45	1,867.04	-3,246.01	4,791.87	4,707.02	84.85	56.476	
12,900.00	10,914.00	10,399.00	7,647.55	51.41	55.05	-92.27	1,915.77	-3,247.46	4,794.57	4,709.48	85.09	56.344	
13,000.00	10,914.00	10,173.38	7,645.88	52.52	51.73	-90.25	2,141.27	-3,253.01	4,797.61	4,714.28	83.33	57.572	
13,100.00	10,914.00	9,820.40	7,651.17	53.66	46.68	-86.17	2,494.10	-3,251.24	4,798.47	4,718.30	80.17	59.856	
13,200.00	10,914.00	9,741.00	7,654.75	54.82	45.57	-86.50	2,573.40	-3,249.48	4,793.64	4,713.44	80.20	59.770	
13,300.00	10,914.00	9,672.11	7,657.65	56.01	44.62	-87.01	2,642.22	-3,248.27	4,789.35	4,708.97	80.38	59.582	
13,400.00	10,914.00	9,548.00	7,664.25	57.22	42.93	-86.62	2,766.14	-3,247.12	4,784.92	4,704.92	80.00	59.810	

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 41H
Project:	Eddy County, New Mexico.(NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 12H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-GYRO-NS, 7060-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
13,500.00	10,914.00	9,503.34	7,666.47	58.46	42.33	-87.51	2,810.74	-3,246.61	4,780.81	4,700.30	80.51	59.384	
13,600.00	10,914.00	9,453.00	7,667.73	59.71	41.65	-88.31	2,861.07	-3,246.29	4,778.24	4,697.28	80.96	59.022	
13,700.00	10,914.00	9,453.00	7,667.73	60.98	41.65	-89.93	2,861.07	-3,246.29	4,776.96	4,695.00	81.96	58.286	
13,755.37	10,914.00	9,422.25	7,668.03	61.70	41.25	-90.33	2,891.82	-3,246.43	4,776.82	4,694.63	82.19	58.119	
13,800.00	10,914.00	9,408.84	7,668.11	62.27	41.07	-90.83	2,905.22	-3,246.64	4,777.09	4,694.60	82.50	57.906	
13,900.00	10,914.00	9,357.00	7,668.15	63.58	40.38	-91.61	2,957.03	-3,248.30	4,778.92	4,695.95	82.97	57.597	
14,000.00	10,914.00	9,191.94	7,669.19	64.91	38.24	-90.56	3,122.02	-3,252.97	4,780.64	4,698.30	82.34	58.061	
14,100.00	10,914.00	9,105.42	7,670.67	66.24	37.16	-90.78	3,208.50	-3,255.20	4,781.29	4,698.75	82.54	57.929	
14,200.00	10,914.00	8,869.10	7,675.93	67.60	34.32	-88.58	3,444.70	-3,258.05	4,780.32	4,698.94	81.38	58.744	
14,300.00	10,914.00	14,300.00	7,675.81	68.96	93.79	-88.50	3,549.38	-3,255.71	4,778.61	4,646.83	131.77	36.264	
14,400.00	10,914.00	8,646.28	7,674.92	70.34	31.87	-88.21	3,667.41	-3,251.44	4,776.27	4,694.77	81.50	58.605	
14,500.00	10,914.00	8,577.92	7,674.46	71.73	31.16	-88.72	3,735.73	-3,249.19	4,774.14	4,692.13	82.01	58.216	
14,600.00	10,914.00	14,600.00	7,674.12	73.13	88.12	-88.80	3,830.52	-3,247.16	4,772.63	4,642.18	130.45	36.585	
14,700.00	10,914.00	8,355.53	7,674.33	74.54	29.06	-88.36	3,958.06	-3,244.25	4,770.69	4,688.21	82.49	57.836	
14,800.00	10,914.00	8,315.00	7,674.27	75.96	28.70	-89.32	3,998.58	-3,243.04	4,768.80	4,685.49	83.31	57.241	
14,900.00	10,914.00	8,252.19	7,673.80	77.39	28.18	-89.92	4,061.37	-3,241.68	4,767.79	4,683.77	84.01	56.751	
14,918.32	10,914.00	8,244.91	7,673.71	77.65	28.12	-90.10	4,068.64	-3,241.61	4,767.76	4,683.59	84.17	56.644	
15,000.00	10,914.00	8,204.41	7,673.14	78.83	27.80	-90.77	4,109.14	-3,241.48	4,768.16	4,683.33	84.83	56.208	
15,100.00	10,914.00	8,125.00	7,673.02	80.28	27.21	-91.10	4,188.54	-3,242.63	4,769.20	4,683.70	85.50	55.780	
15,200.00	10,914.00	8,062.00	7,673.85	81.73	26.78	-91.70	4,251.49	-3,244.99	4,770.94	4,684.61	86.32	55.270	
15,300.00	10,914.00	8,014.62	7,674.51	83.19	26.48	-92.55	4,298.80	-3,247.40	4,773.59	4,686.34	87.25	54.714	
15,400.00	10,914.00	7,997.00	7,674.54	84.66	26.37	-93.88	4,316.40	-3,248.25	4,777.50	4,689.20	88.30	54.107	
15,500.00	10,914.00	7,966.00	7,673.75	86.14	26.19	-94.98	4,347.36	-3,249.68	4,782.91	4,693.62	89.29	53.568	
15,600.00	10,914.00	7,948.71	7,672.76	87.62	26.09	-96.31	4,364.60	-3,250.50	4,790.10	4,699.78	90.32	53.032	
15,700.00	10,914.00	7,934.00	7,671.63	89.11	26.01	-97.66	4,379.25	-3,251.24	4,799.00	4,707.64	91.36	52.529	
15,732.03	10,914.00	7,934.00	7,671.63	89.59	26.01	-98.17	4,379.25	-3,251.24	4,802.25	4,710.54	91.71	52.366	

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 16H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-IS-GYRO-WLINE, 931-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	-34.87	4,760.98	-3,317.66	5,803.09				
100.00	100.00	67.99	67.99	0.13	0.07	-34.87	4,760.86	-3,317.69	5,802.85	5,802.65	0.20	N/A	
200.00	200.00	171.12	171.12	0.49	0.29	-34.87	4,760.45	-3,317.70	5,802.53	5,801.76	0.77	7,576.760	
300.00	300.00	259.59	259.59	0.85	0.46	-34.87	4,760.31	-3,317.57	5,802.32	5,801.02	1.29	4,492.330	
338.48	338.48	292.48	292.48	0.99	0.52	-34.87	4,760.30	-3,317.56	5,802.30	5,800.81	1.48	3,914.140	
400.00	400.00	350.67	350.67	1.21	0.58	-34.87	4,760.31	-3,317.58	5,802.32	5,800.55	1.77	3,274.356	
500.00	500.00	448.32	448.31	1.57	0.70	-34.87	4,760.40	-3,317.60	5,802.40	5,800.14	2.27	2,558.069	
600.00	600.00	550.44	550.44	1.93	0.88	-34.87	4,760.49	-3,317.63	5,802.50	5,799.69	2.80	2,068.641	
700.00	700.00	652.03	652.03	2.29	1.07	-34.87	4,760.61	-3,317.52	5,802.53	5,799.18	3.35	1,730.947	
800.00	800.00	1,503.22	1,500.11	2.64	2.88	-35.04	4,709.18	-3,302.55	5,799.99	5,794.52	5.47	1,059.996	
900.00	900.00	1,573.19	1,569.47	3.00	3.13	-35.07	4,700.47	-3,299.58	5,787.36	5,781.31	6.05	957.031	
1,000.00	1,000.00	1,742.67	1,737.46	3.36	3.78	-35.14	4,679.06	-3,292.78	5,774.93	5,767.96	6.97	829.081	
1,100.00	1,100.00	1,813.00	1,807.06	3.72	4.05	-35.16	4,669.52	-3,289.58	5,761.32	5,753.76	7.56	761.744	
1,200.00	1,200.00	1,864.98	1,858.56	4.08	4.26	-35.18	4,662.85	-3,287.25	5,748.45	5,740.34	8.10	709.567	
1,300.00	1,300.00	1,908.00	1,901.27	4.44	4.43	-35.20	4,657.97	-3,285.53	5,736.76	5,728.15	8.61	666.315	
1,400.00	1,400.00	1,967.76	1,960.65	4.79	4.65	-35.22	4,651.70	-3,283.29	5,725.93	5,716.75	9.18	624.014	
1,500.00	1,500.00	2,090.52	2,082.65	5.15	5.13	-35.25	4,638.76	-3,278.94	5,715.31	5,705.35	9.96	573.767	
1,600.00	1,600.00	2,179.11	2,170.65	5.51	5.47	-35.29	4,628.99	-3,276.00	5,704.38	5,693.75	10.63	536.500	
1,700.00	1,700.00	2,312.96	2,303.56	5.87	6.00	-35.34	4,613.75	-3,271.81	5,693.28	5,681.81	11.47	496.547	
1,800.00	1,800.00	2,402.34	2,392.29	6.23	6.36	-35.38	4,603.32	-3,268.83	5,681.83	5,669.69	12.15	467.809	
1,900.00	1,900.00	2,458.07	2,447.65	6.59	6.58	-35.40	4,597.21	-3,266.99	5,670.98	5,658.27	12.71	446.269	
2,000.00	2,000.00	2,523.22	2,512.43	6.95	6.83	-35.42	4,590.62	-3,264.89	5,660.84	5,647.54	13.30	425.582	
2,100.00	2,100.00	2,604.18	2,592.99	7.30	7.15	-35.44	4,583.18	-3,261.92	5,651.21	5,637.26	13.95	405.115	
2,200.00	2,200.00	2,200.00	2,781.78	7.66	5.56	-35.47	4,566.23	-3,253.04	5,641.53	5,628.68	12.85	438.913	
2,300.00	2,300.00	2,917.71	2,904.72	8.02	8.37	-35.47	4,554.42	-3,245.03	5,629.95	5,614.19	15.77	357.083	
2,400.00	2,400.00	3,050.93	3,037.03	8.38	8.90	-35.48	4,541.26	-3,236.77	5,618.38	5,601.79	16.60	338.548	
2,500.00	2,500.00	3,226.00	3,210.54	8.74	9.61	-35.50	4,521.41	-3,224.57	5,604.77	5,587.19	17.57	318.970	
2,600.00	2,600.00	3,292.19	3,276.10	9.10	9.89	-35.51	4,513.43	-3,220.22	5,591.27	5,573.09	18.18	307.608	
2,700.00	2,700.00	3,334.00	3,317.58	9.45	10.06	-35.52	4,508.70	-3,217.88	5,578.84	5,560.14	18.70	298.375	
2,800.00	2,800.00	3,394.55	3,377.70	9.81	10.30	-35.53	4,502.18	-3,214.94	5,567.26	5,547.98	19.28	288.725	
2,900.00	2,900.00	3,452.50	3,435.29	10.17	10.53	-35.55	4,496.21	-3,212.50	5,556.44	5,536.58	19.86	279.813	
3,000.00	3,000.00	3,549.43	3,531.66	10.53	10.92	-35.57	4,486.41	-3,208.82	5,546.00	5,525.43	20.57	269.631	
3,100.00	3,100.00	3,625.69	3,607.48	10.89	11.22	-35.60	4,478.73	-3,206.19	5,535.80	5,514.59	21.21	261.018	
3,200.00	3,200.00	3,709.47	3,690.81	11.25	11.55	-35.63	4,470.46	-3,203.58	5,525.95	5,504.08	21.87	252.622	
3,300.00	3,300.00	3,791.66	3,772.58	11.61	11.87	-35.65	4,462.60	-3,201.05	5,516.39	5,493.85	22.53	244.799	
3,400.00	3,400.00	3,881.11	3,861.61	11.96	12.22	-35.68	4,454.23	-3,198.51	5,507.11	5,483.89	23.22	237.173	
3,500.00	3,500.00	3,951.42	3,931.58	12.32	12.49	-35.71	4,447.72	-3,196.62	5,498.06	5,474.22	23.84	230.645	
3,600.00	3,600.00	4,016.00	3,995.93	12.68	12.74	-35.72	4,442.38	-3,195.06	5,489.85	5,465.41	24.43	224.675	
3,700.00	3,700.00	4,049.32	4,029.15	13.04	12.86	-35.73	4,439.94	-3,194.33	5,482.48	5,457.56	24.92	220.018	
3,755.00	3,755.00	4,074.18	4,053.95	13.24	12.95	-35.74	4,438.30	-3,193.82	5,478.86	5,453.66	25.21	217.361	
3,800.00	3,800.00	4,111.00	4,090.70	13.39	13.09	-35.75	4,436.12	-3,193.13	5,476.65	5,451.16	25.49	214.820	
3,870.61	3,870.54	4,136.43	4,116.09	13.63	13.18	-35.77	4,434.75	-3,192.69	5,475.30	5,449.48	25.82	212.045	
3,900.00	3,899.86	4,158.23	4,137.85	13.73	13.26	-35.78	4,433.59	-3,192.33	5,475.52	5,449.52	26.00	210.620	
4,000.00	3,999.33	4,251.89	4,231.38	14.06	13.60	-35.85	4,428.77	-3,191.00	5,479.49	5,452.82	26.67	205.481	
4,088.21	4,086.53	4,323.63	4,303.02	14.36	13.86	-35.93	4,424.99	-3,189.95	5,486.76	5,459.54	27.22	201.575	
4,100.00	4,098.13	4,329.29	4,308.67	14.40	13.88	-35.94	4,424.71	-3,189.89	5,488.01	5,460.73	27.28	201.174	
4,200.00	4,196.62	4,394.00	4,373.30	14.75	14.11	-36.04	4,421.67	-3,189.62	5,499.21	5,471.36	27.85	197.484	
4,300.00	4,295.10	4,428.07	4,407.34	15.10	14.22	-36.14	4,420.26	-3,189.74	5,511.21	5,482.91	28.30	194.736	
4,400.00	4,393.58	4,488.00	4,467.24	15.46	14.43	-36.24	4,418.14	-3,190.21	5,524.14	5,495.29	28.85	191.484	
4,500.00	4,492.06	4,542.30	4,521.51	15.83	14.61	-36.34	4,416.53	-3,190.90	5,537.82	5,508.45	29.37	188.524	
4,600.00	4,590.54	4,616.23	4,595.40	16.20	14.86	-36.45	4,414.61	-3,192.18	5,552.12	5,522.15	29.97	185.243	
4,700.00	4,689.02	4,717.54	4,696.67	16.57	15.19	-36.56	4,412.24	-3,193.89	5,566.63	5,535.95	30.67	181.491	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	41H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design — RDX Federal 17 - 16H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-IS-GYRO-WLINE, 931-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
4,800.00	4,787.51	4,812.45	4,791.54	16.95	15.50	-36.67	4,409.84	-3,195.46	5,581.00	5,549.65	31.35	178.022	
4,900.00	4,885.99	4,890.14	4,869.20	17.33	15.76	-36.77	4,408.27	-3,196.68	5,595.73	5,563.77	31.97	175.056	
5,000.00	4,984.47	4,979.28	4,958.32	17.71	16.05	-36.87	4,406.83	-3,198.00	5,610.75	5,578.13	32.62	171.986	
5,100.00	5,082.95	5,080.68	5,059.70	18.10	16.39	-36.97	4,405.25	-3,199.41	5,625.78	5,592.45	33.33	168.798	
5,200.00	5,181.43	5,175.77	5,154.76	18.49	16.70	-37.07	4,403.89	-3,200.68	5,640.90	5,606.89	34.01	165.851	
5,300.00	5,279.92	5,286.61	5,265.58	18.88	17.07	-37.17	4,402.23	-3,202.04	5,655.92	5,621.16	34.76	162.727	
5,400.00	5,378.40	5,383.01	5,361.96	19.28	17.39	-37.27	4,400.62	-3,203.22	5,670.81	5,635.36	35.45	159.963	
5,500.00	5,476.88	5,480.19	5,459.12	19.68	17.72	-37.37	4,399.04	-3,204.57	5,685.85	5,649.71	36.15	157.291	
5,600.00	5,575.36	5,572.69	5,551.59	20.08	18.03	-37.47	4,397.32	-3,206.04	5,700.86	5,664.03	36.83	154.789	
5,700.00	5,673.84	5,641.12	5,620.00	20.48	18.25	-37.57	4,396.06	-3,207.44	5,716.20	5,678.78	37.42	152.760	
5,706.73	5,680.47	5,644.65	5,623.53	20.51	18.27	-37.58	4,396.00	-3,207.52	5,717.25	5,679.80	37.45	152.644	
5,800.00	5,772.68	5,693.70	5,672.56	20.88	18.43	-37.65	4,395.34	-3,208.83	5,730.25	5,692.31	37.94	151.025	
5,900.00	5,872.18	5,752.02	5,730.84	21.25	18.61	-37.71	4,394.91	-3,210.67	5,740.45	5,701.97	38.48	149.193	
6,000.00	5,972.06	5,823.69	5,802.48	21.61	18.84	-37.75	4,395.02	-3,212.88	5,746.64	5,707.59	39.05	147.157	
6,039.95	6,012.00	5,881.80	5,860.57	21.75	19.02	-37.76	4,395.39	-3,214.29	5,747.81	5,708.42	39.39	145.923	
6,100.00	6,072.05	5,953.73	5,932.49	21.95	19.24	-37.77	4,396.04	-3,215.46	5,748.84	5,709.00	39.84	144.300	
6,200.00	6,172.05	6,061.12	6,039.87	22.30	19.57	-37.77	4,397.11	-3,216.80	5,750.38	5,709.84	40.54	141.837	
6,300.00	6,272.05	6,168.48	6,167.21	22.64	19.97	-37.78	4,397.98	-3,218.37	5,751.70	5,710.37	41.32	139.190	
6,400.00	6,372.05	6,265.21	6,263.94	22.99	20.27	-37.78	4,398.48	-3,219.44	5,752.78	5,710.79	41.99	136.996	
6,500.00	6,472.05	14,856.00	10,735.96	23.33	85.89	-87.59	9.93	-3,438.26	5,710.71	5,630.28	80.43	71.001	
6,600.00	6,572.05	14,856.00	10,735.96	23.68	85.89	-87.59	9.93	-3,438.26	5,635.62	5,554.22	81.40	69.236	
6,700.00	6,672.05	14,856.00	10,735.96	24.02	85.89	-87.59	9.93	-3,438.26	5,561.32	5,478.93	82.38	67.507	
6,800.00	6,772.05	14,856.00	10,735.96	24.37	85.89	-87.59	9.93	-3,438.26	5,487.83	5,404.44	83.38	65.813	
6,900.00	6,872.05	14,856.00	10,735.96	24.71	85.89	-87.59	9.93	-3,438.26	5,415.19	5,330.78	84.41	64.157	
7,000.00	6,972.05	14,856.00	10,735.96	25.06	85.89	-87.59	9.93	-3,438.26	5,343.43	5,257.99	85.45	62.537	
7,100.00	7,072.05	14,856.00	10,735.96	25.41	85.89	-87.59	9.93	-3,438.26	5,272.60	5,186.10	86.50	60.953	
7,200.00	7,172.05	14,856.00	10,735.96	25.76	85.89	-87.59	9.93	-3,438.26	5,202.72	5,115.15	87.58	59.408	
7,300.00	7,272.05	14,856.00	10,735.96	26.10	85.89	-87.59	9.93	-3,438.26	5,133.84	5,045.17	88.67	57.899	
7,400.00	7,372.05	14,856.00	10,735.96	26.45	85.89	-87.59	9.93	-3,438.26	5,066.00	4,976.22	89.78	56.429	
7,500.00	7,472.05	14,856.00	10,735.96	26.80	85.89	-87.59	9.93	-3,438.26	4,999.24	4,908.34	90.90	54.996	
7,600.00	7,572.05	14,856.00	10,735.96	27.15	85.89	-87.59	9.93	-3,438.26	4,933.60	4,841.56	92.04	53.603	
7,700.00	7,672.05	14,856.00	10,735.96	27.50	85.89	-87.59	9.93	-3,438.26	4,869.13	4,775.94	93.19	52.247	
7,800.00	7,772.05	14,856.00	10,735.96	27.85	85.89	-87.59	9.93	-3,438.26	4,805.88	4,711.51	94.36	50.931	
7,900.00	7,872.05	14,856.00	10,735.96	28.19	85.89	-87.59	9.93	-3,438.26	4,743.89	4,648.35	95.54	49.654	
8,000.00	7,972.05	14,856.00	10,735.96	28.54	85.89	-87.59	9.93	-3,438.26	4,683.21	4,586.48	96.73	48.416	
8,100.00	8,072.05	14,856.00	10,735.96	28.89	85.89	-87.59	9.93	-3,438.26	4,623.91	4,525.98	97.93	47.218	
8,200.00	8,172.05	14,856.00	10,735.96	29.24	85.89	-87.59	9.93	-3,438.26	4,566.02	4,466.88	99.13	46.059	
8,300.00	8,272.05	14,856.00	10,735.96	29.59	85.89	-87.59	9.93	-3,438.26	4,509.60	4,409.26	100.35	44.941	
8,400.00	8,372.05	14,856.00	10,735.96	29.94	85.89	-87.59	9.93	-3,438.26	4,454.72	4,353.16	101.56	43.863	
8,500.00	8,472.05	14,856.00	10,735.96	30.30	85.89	-87.59	9.93	-3,438.26	4,401.43	4,298.65	102.78	42.825	
8,600.00	8,572.05	14,856.00	10,735.96	30.65	85.89	-87.59	9.93	-3,438.26	4,349.78	4,245.79	103.99	41.827	
8,700.00	8,672.05	14,856.00	10,735.96	31.00	85.89	-87.59	9.93	-3,438.26	4,299.84	4,194.63	105.21	40.871	
8,800.00	8,772.05	14,856.00	10,735.96	31.35	85.89	-87.59	9.93	-3,438.26	4,251.66	4,145.25	106.41	39.955	
8,900.00	8,872.05	14,856.00	10,735.96	31.70	85.89	-87.59	9.93	-3,438.26	4,205.31	4,097.70	107.61	39.080	
9,000.00	8,972.05	14,856.00	10,735.96	32.05	85.89	-87.59	9.93	-3,438.26	4,160.85	4,052.06	108.79	38.246	
9,100.00	9,072.05	14,856.00	10,735.96	32.40	85.89	-87.59	9.93	-3,438.26	4,118.34	4,008.38	109.96	37.453	
9,200.00	9,172.05	14,856.00	10,735.96	32.75	85.89	-87.59	9.93	-3,438.26	4,077.83	3,966.72	111.11	36.702	
9,300.00	9,272.05	14,856.00	10,735.96	33.11	85.89	-87.59	9.93	-3,438.26	4,039.40	3,927.16	112.23	35.991	
9,400.00	9,372.05	14,856.00	10,735.96	33.46	85.89	-87.59	9.93	-3,438.26	4,003.09	3,889.76	113.33	35.322	
9,500.00	9,472.05	14,856.00	10,735.96	33.81	85.89	-87.59	9.93	-3,438.26	3,968.98	3,854.58	114.40	34.694	
9,600.00	9,572.05	14,856.00	10,735.96	34.16	85.89	-87.59	9.93	-3,438.26	3,937.10	3,821.67	115.43	34.108	
9,700.00	9,672.05	14,856.00	10,735.96	34.51	85.89	-87.59	9.93	-3,438.26	3,907.53	3,791.11	116.43	33.562	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 16H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-IS-GYRO-WL INF, 931-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
9,800.00	9,772.05	14,856.00	10,735.96	34.87	85.89	-87.59	9.93	-3,438.26	3,880.31	3,762.93	117.38	33.058	
9,900.00	9,872.05	14,856.00	10,735.96	35.22	85.89	-87.59	9.93	-3,438.26	3,855.50	3,737.21	118.29	32.595	
10,000.00	9,972.05	14,856.00	10,735.96	35.57	85.89	-87.59	9.93	-3,438.26	3,833.13	3,713.98	119.14	32.173	
10,100.00	10,072.05	14,856.00	10,735.96	35.93	85.89	-87.59	9.93	-3,438.26	3,813.25	3,693.30	119.95	31.791	
10,200.00	10,172.05	14,856.00	10,735.96	36.28	85.89	-87.59	9.93	-3,438.26	3,795.91	3,675.21	120.70	31.450	
10,300.00	10,272.05	14,856.00	10,735.96	36.63	85.89	-87.59	9.93	-3,438.26	3,781.13	3,659.74	121.39	31.150	
10,393.77	10,365.82	14,859.76	10,735.75	36.96	85.95	-87.64	6.18	-3,438.43	3,769.63	3,647.59	122.03	30.890	
10,400.00	10,372.05	14,859.39	10,735.77	36.98	85.95	-87.64	6.56	-3,438.42	3,768.94	3,646.88	122.07	30.876	
10,425.00	10,397.03	14,857.06	10,735.90	37.07	85.91	-87.62	8.88	-3,438.31	3,766.27	3,644.09	122.18	30.827	
10,450.00	10,421.92	14,853.43	10,736.09	37.16	85.86	-87.60	12.50	-3,438.14	3,763.70	3,641.44	122.26	30.784	
10,475.00	10,446.66	14,848.52	10,736.36	37.24	85.78	-87.58	17.40	-3,437.91	3,761.26	3,638.94	122.32	30.749	
10,500.00	10,471.18	14,842.33	10,736.70	37.33	85.69	-87.56	23.57	-3,437.61	3,758.93	3,636.58	122.36	30.721	
10,525.00	10,495.41	14,834.88	10,737.10	37.41	85.58	-87.54	31.00	-3,437.26	3,756.73	3,634.36	122.37	30.701	
10,550.00	10,519.28	14,826.20	10,737.57	37.48	85.45	-87.52	39.66	-3,436.86	3,754.64	3,632.29	122.35	30.688	
10,575.00	10,542.73	14,817.80	10,738.03	37.56	85.32	-87.52	48.03	-3,436.46	3,752.67	3,630.33	122.33	30.676	
10,600.00	10,565.70	14,804.93	10,738.72	37.63	85.13	-87.48	60.87	-3,435.85	3,750.81	3,628.57	122.24	30.684	
10,625.00	10,588.12	14,790.66	10,739.50	37.70	84.92	-87.43	75.11	-3,435.18	3,749.05	3,626.93	122.12	30.699	
10,650.00	10,609.93	14,775.02	10,740.38	37.76	84.68	-87.38	90.70	-3,434.43	3,747.39	3,625.41	121.98	30.722	
10,675.00	10,631.07	14,758.04	10,741.36	37.83	84.43	-87.32	107.63	-3,433.60	3,745.81	3,624.00	121.81	30.751	
10,700.00	10,651.49	14,739.78	10,742.43	37.88	84.16	-87.26	125.84	-3,432.69	3,744.30	3,622.69	121.62	30.788	
10,725.00	10,671.12	14,721.21	10,743.56	37.94	83.88	-87.21	144.35	-3,431.76	3,742.86	3,621.44	121.41	30.828	
10,750.00	10,689.91	14,704.66	10,744.55	37.98	83.63	-87.21	160.85	-3,430.93	3,741.47	3,620.24	121.24	30.861	
10,768.77	10,703.44	14,691.70	10,745.32	38.02	83.44	-87.21	173.77	-3,430.28	3,740.48	3,619.38	121.10	30.888	
10,800.00	10,725.52	14,669.80	10,746.58	38.07	83.11	-87.22	195.61	-3,429.19	3,738.90	3,618.05	120.86	30.937	
10,868.77	10,774.15	14,619.55	10,749.35	38.18	82.36	-87.19	245.72	-3,426.73	3,735.88	3,615.58	120.29	31.056	
10,875.00	10,778.53	14,614.13	10,749.63	38.19	82.28	-87.18	251.12	-3,426.46	3,735.63	3,615.40	120.23	31.071	
10,900.00	10,795.50	14,591.86	10,750.74	38.24	81.95	-87.12	273.34	-3,425.35	3,734.64	3,614.67	119.97	31.131	
10,925.00	10,811.48	14,568.77	10,751.82	38.27	81.61	-87.06	296.38	-3,424.18	3,733.65	3,613.97	119.69	31.195	
10,950.00	10,826.44	14,544.92	10,752.84	38.31	81.26	-87.00	320.18	-3,422.95	3,732.66	3,613.27	119.39	31.264	
10,975.00	10,840.33	14,521.47	10,753.79	38.34	80.91	-86.96	343.57	-3,421.72	3,731.65	3,612.54	119.11	31.330	
11,000.00	10,853.11	14,497.87	10,754.75	38.37	80.56	-86.93	367.12	-3,420.47	3,730.62	3,611.80	118.82	31.397	
11,025.00	10,864.75	14,473.62	10,755.75	38.41	80.20	-86.89	391.32	-3,419.18	3,729.57	3,611.04	118.52	31.467	
11,050.00	10,875.22	14,448.79	10,756.78	38.47	79.84	-86.86	416.09	-3,417.85	3,728.48	3,610.26	118.22	31.539	
11,075.00	10,884.48	14,425.20	10,757.72	38.54	79.49	-86.85	439.62	-3,416.58	3,727.35	3,609.42	117.93	31.606	
11,100.00	10,892.52	14,401.82	10,758.52	38.61	79.14	-86.86	462.95	-3,415.31	3,726.19	3,608.53	117.65	31.671	
11,125.00	10,899.30	14,378.18	10,759.19	38.69	78.80	-86.86	486.55	-3,414.03	3,724.99	3,607.62	117.37	31.737	
11,150.00	10,904.82	14,354.32	10,759.71	38.76	78.45	-86.87	510.37	-3,412.74	3,723.76	3,606.67	117.09	31.804	
11,175.00	10,909.05	14,255.00	10,762.35	38.83	76.99	-85.72	609.44	-3,406.23	3,722.06	3,606.40	115.66	32.182	
11,200.00	10,911.99	14,255.00	10,762.35	38.91	76.99	-86.10	609.44	-3,406.23	3,720.32	3,604.58	115.74	32.143	
11,225.00	10,913.63	14,226.56	10,763.06	38.98	76.58	-86.05	637.79	-3,404.14	3,718.45	3,603.06	115.40	32.224	
11,243.77	10,914.00	14,218.70	10,763.14	39.04	76.47	-86.22	645.63	-3,403.61	3,717.16	3,601.82	115.34	32.228	
11,300.00	10,914.00	14,195.15	10,763.06	39.22	76.12	-86.72	669.14	-3,402.16	3,713.59	3,598.40	115.19	32.240	
11,400.00	10,914.00	14,143.84	10,761.43	39.58	75.37	-87.47	720.36	-3,399.62	3,708.44	3,593.62	114.81	32.300	
11,500.00	10,914.00	14,027.13	10,756.94	40.01	73.68	-87.21	836.85	-3,394.24	3,703.78	3,590.25	113.53	32.624	
11,600.00	10,914.00	13,874.68	10,753.89	40.50	71.49	-86.39	989.02	-3,385.55	3,697.92	3,586.12	111.80	33.077	
11,700.00	10,914.00	13,746.96	10,754.65	41.04	69.68	-85.96	1,116.46	-3,377.05	3,691.06	3,580.54	110.52	33.398	
11,800.00	10,914.00	13,501.00	10,760.23	41.65	66.25	-83.69	1,361.12	-3,353.10	3,679.90	3,572.33	107.57	34.210	
11,900.00	10,914.00	13,434.18	10,760.41	42.31	65.33	-84.19	1,427.54	-3,345.76	3,668.87	3,561.52	107.35	34.178	
12,000.00	10,914.00	13,372.40	10,760.33	43.02	64.49	-84.78	1,489.04	-3,339.90	3,659.16	3,551.91	107.25	34.118	
12,100.00	10,914.00	13,312.00	10,760.23	43.78	63.67	-85.40	1,549.20	-3,334.58	3,650.26	3,543.04	107.22	34.044	
12,200.00	10,914.00	13,269.41	10,759.93	44.60	63.09	-86.30	1,591.67	-3,331.38	3,642.73	3,535.24	107.49	33.889	
12,300.00	10,914.00	13,218.00	10,759.00	45.45	62.39	-87.06	1,643.00	-3,328.68	3,637.05	3,529.39	107.67	33.781	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design | RDX Federal 17 - 16H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 100-IS-GYRO-WLINE, 931-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
12,400.00	10,914.00	13,186.66	10,758.23	46.35	61.96	-88.14	1,674.31	-3,327.53	3,632.87	3,524.71	108.15	33.591	
12,500.00	10,914.00	12,500.00	10,756.30	47.29	52.73	-88.38	1,759.03	-3,325.25	3,630.00	3,530.13	99.87	36.349	
12,600.00	10,914.00	12,967.52	10,755.08	48.27	59.02	-87.84	1,893.30	-3,320.82	3,626.55	3,519.42	107.13	33.852	
12,700.00	10,914.00	12,830.36	10,758.84	49.28	57.22	-87.25	2,030.30	-3,315.26	3,622.28	3,515.93	106.34	34.062	
12,800.00	10,914.00	12,680.31	10,764.97	50.33	55.29	-86.46	2,179.98	-3,306.84	3,616.23	3,510.77	105.46	34.290	
12,900.00	10,914.00	12,540.78	10,771.45	51.41	53.54	-85.83	2,319.05	-3,297.46	3,609.13	3,504.36	104.78	34.446	
13,000.00	10,914.00	12,482.45	10,773.22	52.52	52.82	-86.49	2,377.22	-3,293.60	3,602.24	3,497.05	105.19	34.245	
13,100.00	10,914.00	12,399.49	10,774.11	53.66	51.82	-86.76	2,460.04	-3,288.84	3,596.26	3,490.94	105.33	34.144	
13,200.00	10,914.00	12,309.42	10,775.01	54.82	50.74	-86.91	2,549.97	-3,283.87	3,590.54	3,485.12	105.42	34.060	
13,300.00	10,914.00	12,241.94	10,775.75	56.01	49.95	-87.43	2,617.36	-3,280.45	3,585.30	3,479.48	105.82	33.881	
13,400.00	10,914.00	12,182.00	10,775.45	57.22	49.25	-88.07	2,677.25	-3,278.17	3,581.27	3,474.93	106.34	33.678	
13,500.00	10,914.00	12,142.55	10,775.08	58.46	48.79	-89.04	2,716.69	-3,277.21	3,578.60	3,471.49	107.11	33.410	
13,600.00	10,914.00	12,087.00	10,775.20	59.71	48.16	-89.75	2,772.23	-3,276.84	3,577.57	3,469.85	107.71	33.214	
13,622.45	10,914.00	12,087.00	10,775.20	60.00	48.16	-90.11	2,772.23	-3,276.84	3,577.50	3,469.51	107.99	33.129	
13,700.00	10,914.00	12,023.89	10,775.34	60.98	47.45	-90.34	2,835.34	-3,277.13	3,577.70	3,469.44	108.26	33.048	
13,800.00	10,914.00	11,924.64	10,774.18	62.27	46.36	-90.35	2,934.58	-3,277.76	3,578.17	3,469.71	108.46	32.992	
13,900.00	10,914.00	11,769.90	10,770.85	63.58	44.72	-89.48	3,089.28	-3,277.87	3,578.26	3,470.10	108.16	33.084	
14,000.00	10,914.00	11,568.63	10,771.48	64.91	42.74	-87.85	3,290.47	-3,272.43	3,574.97	3,467.44	107.53	33.247	
14,100.00	10,914.00	11,446.20	10,772.79	66.24	41.63	-87.49	3,412.78	-3,267.24	3,570.46	3,462.71	107.75	33.137	
14,200.00	10,914.00	11,311.27	10,774.30	67.60	40.48	-86.93	3,547.53	-3,260.48	3,565.18	3,457.23	107.95	33.026	
14,300.00	10,914.00	11,194.26	10,772.23	68.96	39.55	-86.65	3,664.33	-3,254.26	3,559.78	3,451.39	108.38	32.844	
14,400.00	10,914.00	11,095.00	10,766.05	70.34	38.82	-86.67	3,763.18	-3,248.20	3,553.64	3,444.63	109.01	32.598	
14,500.00	10,914.00	11,054.17	10,759.69	71.73	38.52	-87.63	3,803.44	-3,245.98	3,548.46	3,438.35	110.11	32.227	
14,600.00	10,914.00	11,016.10	10,750.87	73.13	38.24	-88.64	3,840.43	-3,244.47	3,544.99	3,433.78	111.21	31.875	
14,700.00	10,914.00	10,969.00	10,735.70	74.54	37.90	-89.54	3,884.99	-3,243.36	3,543.34	3,431.10	112.25	31.568	
14,749.54	10,914.00	10,953.44	10,729.77	75.24	37.79	-90.11	3,899.38	-3,243.12	3,543.12	3,430.31	112.81	31.407	CC
14,800.00	10,914.00	10,921.90	10,716.49	75.96	37.57	-90.46	3,927.97	-3,242.77	3,543.33	3,430.06	113.27	31.281	ES
14,900.00	10,914.00	10,866.09	10,689.99	77.39	37.19	-91.29	3,977.08	-3,242.20	3,544.58	3,430.35	114.23	31.029	
15,000.00	10,914.00	10,812.00	10,660.91	78.83	36.83	-92.17	4,022.67	-3,241.95	3,547.36	3,432.16	115.20	30.794	
15,100.00	10,914.00	10,794.56	10,650.76	80.28	36.72	-93.55	4,036.85	-3,242.05	3,552.15	3,435.78	116.38	30.522	
15,200.00	10,914.00	10,781.00	10,642.54	81.73	36.64	-94.99	4,047.63	-3,242.31	3,559.37	3,441.82	117.55	30.281	
15,300.00	10,914.00	10,749.00	10,621.91	83.19	36.44	-96.20	4,072.06	-3,243.30	3,568.88	3,450.31	118.57	30.099	
15,400.00	10,914.00	10,736.03	10,613.12	84.66	36.36	-97.64	4,081.57	-3,243.86	3,580.74	3,461.08	119.66	29.924	
15,500.00	10,914.00	10,718.00	10,600.61	86.14	36.25	-99.02	4,094.53	-3,244.87	3,595.03	3,474.35	120.68	29.789	
15,600.00	10,914.00	10,592.00	10,510.40	87.62	35.51	-99.20	4,182.20	-3,251.83	3,611.46	3,490.32	121.14	29.812	
15,700.00	10,914.00	10,561.00	10,488.62	89.11	35.34	-100.42	4,204.21	-3,253.25	3,628.10	3,506.05	122.06	29.725	
15,732.03	10,914.00	10,561.00	10,488.62	89.59	35.34	-100.92	4,204.21	-3,253.25	3,633.94	3,511.56	122.39	29.692	SF

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 25H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 181-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	-33.20	4,941.60	-3,233.20	5,905.51				
100.00	100.00	43.16	43.16	0.13	0.07	-33.20	4,941.64	-3,233.21	5,905.39	5,905.19	0.20	N/A	
200.00	200.00	121.63	121.63	0.49	0.20	-33.20	4,941.94	-3,233.31	5,905.77	5,905.08	0.69	8,564.877	
300.00	300.00	204.00	204.00	0.85	0.38	-33.19	4,942.55	-3,233.49	5,906.51	5,905.29	1.23	4,817.052	
400.00	400.00	348.21	348.20	1.21	0.89	-33.18	4,943.96	-3,233.18	5,907.30	5,905.20	2.10	2,816.243	
500.00	500.00	435.96	435.94	1.57	1.20	-33.18	4,944.51	-3,232.53	5,907.44	5,904.67	2.77	2,135.018	
600.00	600.00	520.24	520.22	1.93	1.50	-33.17	4,945.26	-3,232.12	5,907.91	5,904.48	3.43	1,724.621	
700.00	700.00	614.40	614.38	2.29	1.83	-33.17	4,945.89	-3,232.29	5,908.57	5,904.45	4.12	1,434.420	
800.00	800.00	707.38	707.36	2.64	2.16	-33.17	4,946.50	-3,232.60	5,909.30	5,904.49	4.81	1,228.932	
900.00	900.00	878.57	878.54	3.00	2.75	-33.16	4,946.56	-3,232.45	5,909.13	5,903.37	5.75	1,026.953	
1,000.00	1,000.00	960.90	960.88	3.36	3.03	-33.17	4,946.27	-3,232.57	5,908.91	5,902.52	6.39	924.729	
1,059.63	1,059.63	1,014.66	1,014.63	3.57	3.21	-33.17	4,946.04	-3,232.88	5,908.88	5,902.09	6.79	870.732	
1,100.00	1,100.00	1,047.01	1,046.98	3.72	3.32	-33.17	4,945.89	-3,233.15	5,908.90	5,901.86	7.04	839.014	
1,200.00	1,200.00	1,136.11	1,136.08	4.08	3.63	-33.18	4,945.55	-3,234.13	5,909.18	5,901.47	7.71	766.459	
1,300.00	1,300.00	1,252.96	1,252.92	4.44	4.04	-33.20	4,944.87	-3,235.61	5,909.39	5,900.92	8.48	697.249	
1,399.93	1,399.93	1,354.99	1,354.93	4.79	4.40	-33.21	4,944.28	-3,236.44	5,909.36	5,900.17	9.19	643.023	
1,400.00	1,400.00	1,355.05	1,355.00	4.79	4.40	-33.21	4,944.28	-3,236.44	5,909.36	5,900.17	9.19	642.991	
1,500.00	1,500.00	1,451.03	1,450.97	5.15	4.73	-33.22	4,943.68	-3,237.44	5,909.40	5,899.51	9.89	597.764	
1,600.00	1,600.00	1,564.76	1,564.69	5.51	5.13	-33.23	4,942.90	-3,238.58	5,909.38	5,898.73	10.64	555.155	
1,700.00	1,700.00	1,672.98	1,672.91	5.87	5.51	-33.24	4,942.10	-3,239.34	5,909.14	5,897.76	11.38	519.088	
1,800.00	1,800.00	1,784.40	1,784.32	6.23	5.91	-33.25	4,941.11	-3,240.09	5,908.77	5,896.64	12.13	486.945	
1,900.00	1,900.00	1,897.08	1,896.99	6.59	6.30	-33.26	4,939.93	-3,240.53	5,908.11	5,895.22	12.89	458.446	
2,000.00	2,000.00	1,988.12	1,988.02	6.95	6.62	-33.26	4,939.49	-3,240.11	5,907.45	5,893.89	13.56	435.641	
2,100.00	2,100.00	2,079.60	2,079.50	7.30	6.93	-33.25	4,939.80	-3,238.89	5,906.99	5,892.76	14.23	415.035	
2,200.00	2,200.00	2,185.41	2,185.29	7.66	7.29	-33.24	4,940.27	-3,237.30	5,906.55	5,891.59	14.95	394.976	
2,300.00	2,300.00	2,282.75	2,282.63	8.02	7.63	-33.22	4,940.56	-3,235.91	5,906.02	5,890.37	15.65	377.421	
2,400.00	2,400.00	2,416.81	2,416.68	8.38	8.09	-33.21	4,940.42	-3,234.58	5,905.43	5,888.96	16.47	358.544	
2,500.00	2,500.00	2,506.16	2,506.02	8.74	8.40	-33.21	4,939.91	-3,233.80	5,904.47	5,887.33	17.14	344.474	
2,600.00	2,600.00	2,618.32	2,618.18	9.10	8.80	-33.21	4,938.86	-3,233.45	5,903.52	5,885.63	17.89	329.968	
2,700.00	2,700.00	2,705.14	2,704.99	9.45	9.10	-33.22	4,937.99	-3,233.37	5,902.62	5,884.06	18.55	318.115	
2,800.00	2,800.00	2,925.77	2,925.56	9.81	9.88	-33.21	4,934.32	-3,230.21	5,900.07	5,880.39	19.68	299.778	
2,900.00	2,900.00	12,542.00	7,916.32	10.17	85.19	-86.92	158.16	-2,937.52	5,854.14	5,794.37	59.77	97.948	
3,000.00	3,000.00	12,542.00	7,916.32	10.53	85.19	-86.92	158.16	-2,937.52	5,767.90	5,707.47	60.44	95.439	
3,100.00	3,100.00	12,542.00	7,916.32	10.89	85.19	-86.92	158.16	-2,937.52	5,682.11	5,620.99	61.12	92.960	
3,200.00	3,200.00	12,542.00	7,916.32	11.25	85.19	-86.92	158.16	-2,937.52	5,596.80	5,534.96	61.83	90.513	
3,300.00	3,300.00	12,542.00	7,916.32	11.61	85.19	-86.92	158.16	-2,937.52	5,511.98	5,449.41	62.57	88.099	
3,400.00	3,400.00	12,542.00	7,916.32	11.96	85.19	-86.92	158.16	-2,937.52	5,427.67	5,364.35	63.32	85.719	
3,500.00	3,500.00	12,542.00	7,916.32	12.32	85.19	-86.92	158.16	-2,937.52	5,343.91	5,279.81	64.10	83.374	
3,600.00	3,600.00	12,542.00	7,916.32	12.68	85.19	-86.92	158.16	-2,937.52	5,260.71	5,195.82	64.90	81.064	
3,700.00	3,700.00	12,542.00	7,916.32	13.04	85.19	-86.92	158.16	-2,937.52	5,178.11	5,112.39	65.72	78.791	
3,755.00	3,755.00	12,542.00	7,916.32	13.24	85.19	-86.92	158.16	-2,937.52	5,132.94	5,066.76	66.18	77.557	
3,800.00	3,800.00	12,542.00	7,916.32	13.39	85.19	-86.91	158.16	-2,937.52	5,096.42	5,029.85	66.57	76.561	
3,900.00	3,899.86	12,542.00	7,916.32	13.73	85.19	-86.88	158.16	-2,937.52	5,017.90	4,950.44	67.46	74.380	
4,000.00	3,999.33	12,542.00	7,916.32	14.06	85.19	-86.80	158.16	-2,937.52	4,943.35	4,874.92	68.43	72.240	
4,088.21	4,086.53	12,542.00	7,916.32	14.36	85.19	-86.70	158.16	-2,937.52	4,881.20	4,811.86	69.34	70.396	
4,100.00	4,098.13	12,542.00	7,916.32	14.40	85.19	-86.69	158.16	-2,937.52	4,873.15	4,803.69	69.46	70.157	
4,200.00	4,196.62	12,542.00	7,916.32	14.75	85.19	-86.56	158.16	-2,937.52	4,805.40	4,734.85	70.55	68.111	
4,300.00	4,295.10	12,542.00	7,916.32	15.10	85.19	-86.43	158.16	-2,937.52	4,738.80	4,667.13	71.67	66.117	
4,400.00	4,393.58	12,542.00	7,916.32	15.46	85.19	-86.31	158.16	-2,937.52	4,673.39	4,600.57	72.82	64.179	
4,500.00	4,492.06	12,542.00	7,916.32	15.83	85.19	-86.18	158.16	-2,937.52	4,609.22	4,535.23	73.99	62.295	
4,600.00	4,590.54	12,542.00	7,916.32	16.20	85.19	-86.06	158.16	-2,937.52	4,546.34	4,471.16	75.19	60.468	
4,700.00	4,689.02	12,542.00	7,916.32	16.57	85.19	-85.94	158.16	-2,937.52	4,484.82	4,408.41	76.41	58.697	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	41H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design | RDX Federal 17 - 25H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 181-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
4,800.00	4,787.51	12,542.00	7,916.32	16.95	85.19	-85.82	158.16	-2,937.52	4,424.69	4,347.05	77.65	56.983	
4,900.00	4,885.99	12,542.00	7,916.32	17.33	85.19	-85.70	158.16	-2,937.52	4,366.03	4,287.12	78.91	55.327	
5,000.00	4,984.47	12,542.00	7,916.32	17.71	85.19	-85.58	158.16	-2,937.52	4,308.90	4,228.70	80.20	53.729	
5,100.00	5,082.95	12,542.00	7,916.32	18.10	85.19	-85.47	158.16	-2,937.52	4,253.34	4,171.84	81.50	52.189	
5,200.00	5,181.43	12,542.00	7,916.32	18.49	85.19	-85.35	158.16	-2,937.52	4,199.44	4,116.62	82.82	50.708	
5,300.00	5,279.92	12,542.00	7,916.32	18.88	85.19	-85.24	158.16	-2,937.52	4,147.24	4,063.09	84.15	49.285	
5,400.00	5,378.40	12,542.00	7,916.32	19.28	85.19	-85.13	158.16	-2,937.52	4,096.82	4,011.33	85.49	47.921	
5,500.00	5,476.88	12,542.00	7,916.32	19.68	85.19	-85.02	158.16	-2,937.52	4,048.24	3,961.40	86.84	46.616	
5,600.00	5,575.36	12,542.00	7,916.32	20.08	85.19	-84.91	158.16	-2,937.52	4,001.58	3,913.38	88.20	45.370	
5,700.00	5,673.84	12,542.00	7,916.32	20.48	85.19	-84.80	158.16	-2,937.52	3,956.89	3,867.33	89.56	44.183	
5,706.73	5,680.47	12,542.00	7,916.32	20.51	85.19	-84.79	158.16	-2,937.52	3,953.95	3,864.30	89.65	44.105	
5,800.00	5,772.68	12,542.00	7,916.32	20.88	85.19	-84.70	158.16	-2,937.52	3,912.30	3,821.39	90.90	43.037	
5,900.00	5,872.18	12,542.00	7,916.32	21.25	85.19	-84.64	158.16	-2,937.52	3,865.34	3,773.11	92.22	41.913	
6,000.00	5,972.06	12,542.00	7,916.32	21.61	85.19	-84.61	158.16	-2,937.52	3,816.05	3,722.54	93.51	40.810	
6,039.95	6,012.00	12,542.00	7,916.32	21.75	85.19	-84.61	158.16	-2,937.52	3,795.71	3,701.70	94.01	40.374	
6,100.00	6,072.05	12,542.00	7,916.32	21.95	85.19	-84.61	158.16	-2,937.52	3,765.22	3,670.46	94.77	39.732	
6,200.00	6,172.05	12,542.00	7,916.32	22.30	85.19	-84.61	158.16	-2,937.52	3,716.05	3,620.04	96.01	38.705	
6,300.00	6,272.05	12,542.00	7,916.32	22.64	85.19	-84.61	158.16	-2,937.52	3,668.95	3,571.70	97.25	37.728	
6,400.00	6,372.05	12,542.00	7,916.32	22.99	85.19	-84.61	158.16	-2,937.52	3,624.00	3,525.52	98.47	36.802	
6,500.00	6,472.05	12,542.00	7,916.32	23.33	85.19	-84.61	158.16	-2,937.52	3,581.27	3,481.59	99.68	35.927	
6,600.00	6,572.05	12,542.00	7,916.32	23.68	85.19	-84.61	158.16	-2,937.52	3,540.85	3,439.99	100.87	35.104	
6,700.00	6,672.05	12,542.00	7,916.32	24.02	85.19	-84.61	158.16	-2,937.52	3,502.83	3,400.80	102.03	34.333	
6,800.00	6,772.05	12,542.00	7,916.32	24.37	85.19	-84.61	158.16	-2,937.52	3,467.27	3,364.12	103.15	33.613	
6,900.00	6,872.05	12,542.00	7,916.32	24.71	85.19	-84.61	158.16	-2,937.52	3,434.25	3,330.01	104.24	32.946	
7,000.00	6,972.05	12,542.00	7,916.32	25.06	85.19	-84.61	158.16	-2,937.52	3,403.86	3,298.57	105.29	32.330	
7,100.00	7,072.05	12,542.00	7,916.32	25.41	85.19	-84.61	158.16	-2,937.52	3,376.15	3,269.87	106.28	31.766	
7,200.00	7,172.05	12,542.00	7,916.32	25.76	85.19	-84.61	158.16	-2,937.52	3,351.20	3,243.97	107.22	31.254	
7,300.00	7,272.05	12,542.00	7,916.32	26.10	85.19	-84.61	158.16	-2,937.52	3,329.07	3,220.96	108.11	30.794	
7,400.00	7,372.05	12,542.00	7,916.32	26.45	85.19	-84.61	158.16	-2,937.52	3,309.81	3,200.88	108.93	30.386	
7,500.00	7,472.05	12,542.00	7,916.32	26.80	85.19	-84.61	158.16	-2,937.52	3,293.47	3,183.80	109.68	30.029	
7,600.00	7,572.05	12,542.00	7,916.32	27.15	85.19	-84.61	158.16	-2,937.52	3,280.11	3,169.75	110.35	29.723	
7,700.00	7,672.05	12,542.00	7,916.32	27.50	85.19	-84.61	158.16	-2,937.52	3,269.75	3,158.79	110.96	29.469	
7,800.00	7,772.05	12,542.00	7,916.32	27.85	85.19	-84.61	158.16	-2,937.52	3,262.42	3,150.95	111.48	29.265	
7,900.00	7,872.05	12,542.00	7,916.32	28.19	85.19	-84.61	158.16	-2,937.52	3,258.15	3,146.23	111.92	29.112	
7,989.26	7,961.32	12,542.00	7,916.32	28.51	85.19	-84.61	158.16	-2,937.52	3,256.93	3,144.69	112.24	29.017 CC	
8,000.00	7,972.05	12,542.00	7,916.32	28.54	85.19	-84.61	158.16	-2,937.52	3,256.95	3,144.67	112.28	29.009 ES	
8,100.00	8,072.05	12,542.00	7,916.32	28.89	85.19	-84.61	158.16	-2,937.52	3,258.81	3,146.26	112.55	28.955	
8,200.00	8,172.05	12,542.00	7,916.32	29.24	85.19	-84.61	158.16	-2,937.52	3,263.74	3,151.00	112.74	28.950 SF	
8,300.00	8,272.05	12,542.00	7,916.32	29.59	85.19	-84.61	158.16	-2,937.52	3,271.72	3,158.87	112.84	28.993	
8,400.00	8,372.05	12,542.00	7,916.32	29.94	85.19	-84.61	158.16	-2,937.52	3,282.73	3,169.86	112.87	29.084	
8,500.00	8,472.05	12,542.00	7,916.32	30.30	85.19	-84.61	158.16	-2,937.52	3,296.73	3,183.92	112.82	29.222	
8,600.00	8,572.05	12,542.00	7,916.32	30.65	85.19	-84.61	158.16	-2,937.52	3,313.70	3,201.01	112.69	29.407	
8,700.00	8,672.05	12,542.00	7,916.32	31.00	85.19	-84.61	158.16	-2,937.52	3,333.58	3,221.10	112.48	29.636	
8,800.00	8,772.05	12,542.00	7,916.32	31.35	85.19	-84.61	158.16	-2,937.52	3,356.32	3,244.11	112.21	29.911	
8,900.00	8,872.05	12,542.00	7,916.32	31.70	85.19	-84.61	158.16	-2,937.52	3,381.87	3,269.99	111.87	30.229	
9,000.00	8,972.05	12,542.00	7,916.32	32.05	85.19	-84.61	158.16	-2,937.52	3,410.16	3,298.68	111.48	30.590	
9,100.00	9,072.05	12,542.00	7,916.32	32.40	85.19	-84.61	158.16	-2,937.52	3,441.12	3,330.09	111.03	30.993	
9,200.00	9,172.05	12,542.00	7,916.32	32.75	85.19	-84.61	158.16	-2,937.52	3,474.69	3,364.16	110.53	31.437	
9,300.00	9,272.05	12,542.00	7,916.32	33.11	85.19	-84.61	158.16	-2,937.52	3,510.79	3,400.80	109.99	31.920	
9,400.00	9,372.05	12,542.00	7,916.32	33.46	85.19	-84.61	158.16	-2,937.52	3,549.33	3,439.93	109.40	32.442	
9,500.00	9,472.05	12,542.00	7,916.32	33.81	85.19	-84.61	158.16	-2,937.52	3,590.25	3,481.46	108.79	33.002	
9,600.00	9,572.05	12,542.00	7,916.32	34.16	85.19	-84.61	158.16	-2,937.52	3,633.46	3,525.32	108.15	33.598	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 25H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 181-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
9,700.00	9,672.05	12,542.00	7,916.32	34.51	85.19	-84.61	158.16	-2,937.52	3,678.89	3,571.41	107.48	34.228	
9,800.00	9,772.05	12,542.00	7,916.32	34.87	85.19	-84.61	158.16	-2,937.52	3,726.44	3,619.64	106.80	34.893	
9,900.00	9,872.05	12,542.00	7,916.32	35.22	85.19	-84.61	158.16	-2,937.52	3,776.04	3,669.95	106.10	35.590	
10,000.00	9,972.05	12,542.00	7,916.32	35.57	85.19	-84.61	158.16	-2,937.52	3,827.62	3,722.23	105.39	36.319	
10,100.00	10,072.05	12,542.00	7,916.32	35.93	85.19	-84.61	158.16	-2,937.52	3,881.08	3,776.41	104.68	37.077	
10,200.00	10,172.05	12,542.00	7,916.32	36.28	85.19	-84.61	158.16	-2,937.52	3,936.36	3,832.40	103.96	37.864	
10,300.00	10,272.05	12,542.00	7,916.32	36.63	85.19	-84.61	158.16	-2,937.52	3,993.38	3,890.14	103.25	38.678	
10,393.77	10,365.82	12,542.00	7,916.32	36.96	85.19	-84.61	158.16	-2,937.52	4,048.36	3,945.78	102.58	39.465	
10,400.00	10,372.05	12,542.00	7,916.32	36.98	85.19	-84.61	158.16	-2,937.52	4,052.06	3,949.53	102.54	39.518	
10,425.00	10,397.03	12,542.00	7,916.32	37.07	85.19	-84.63	158.16	-2,937.52	4,066.90	3,964.54	102.36	39.731	
10,450.00	10,421.92	12,542.00	7,916.32	37.16	85.19	-84.67	158.16	-2,937.52	4,081.68	3,979.49	102.19	39.942	
10,475.00	10,446.66	12,542.00	7,916.32	37.24	85.19	-84.73	158.16	-2,937.52	4,096.37	3,994.35	102.02	40.153	
10,500.00	10,471.18	12,542.00	7,916.32	37.33	85.19	-84.82	158.16	-2,937.52	4,110.94	4,009.08	101.85	40.361	
10,525.00	10,495.41	12,542.00	7,916.32	37.41	85.19	-84.92	158.16	-2,937.52	4,125.33	4,023.64	101.69	40.566	
10,550.00	10,519.28	12,542.00	7,916.32	37.48	85.19	-85.05	158.16	-2,937.52	4,139.52	4,037.98	101.54	40.769	
10,575.00	10,542.73	12,542.00	7,916.32	37.56	85.19	-85.20	158.16	-2,937.52	4,153.46	4,052.08	101.38	40.968	
10,600.00	10,565.70	12,542.00	7,916.32	37.63	85.19	-85.38	158.16	-2,937.52	4,167.13	4,065.89	101.24	41.162	
10,625.00	10,588.12	12,542.00	7,916.32	37.70	85.19	-85.57	158.16	-2,937.52	4,180.48	4,079.39	101.10	41.352	
10,650.00	10,609.93	12,542.00	7,916.32	37.76	85.19	-85.79	158.16	-2,937.52	4,193.49	4,092.53	100.96	41.536	
10,675.00	10,631.07	12,542.00	7,916.32	37.83	85.19	-86.02	158.16	-2,937.52	4,206.12	4,105.29	100.83	41.714	
10,700.00	10,651.49	12,542.00	7,916.32	37.88	85.19	-86.27	158.16	-2,937.52	4,218.34	4,117.63	100.71	41.886	
10,725.00	10,671.12	12,542.00	7,916.32	37.94	85.19	-86.55	158.16	-2,937.52	4,230.12	4,129.52	100.59	42.051	
10,750.00	10,689.91	12,542.00	7,916.32	37.98	85.19	-86.84	158.16	-2,937.52	4,241.43	4,140.94	100.49	42.209	
10,768.77	10,703.44	12,542.00	7,916.32	38.02	85.19	-87.07	158.16	-2,937.52	4,249.60	4,149.19	100.41	42.322	
10,800.00	10,725.52	12,542.00	7,916.32	38.07	85.19	-87.46	158.16	-2,937.52	4,263.05	4,162.75	100.29	42.506	
10,868.77	10,774.15	12,542.00	7,916.32	38.18	85.19	-88.31	158.16	-2,937.52	4,293.31	4,193.28	100.04	42.918	
10,875.00	10,778.53	12,542.00	7,916.32	38.19	85.19	-88.39	158.16	-2,937.52	4,296.08	4,196.07	100.01	42.955	
10,900.00	10,795.50	12,542.00	7,916.32	38.24	85.19	-88.72	158.16	-2,937.52	4,306.85	4,206.92	99.93	43.101	
10,925.00	10,811.48	12,542.00	7,916.32	38.27	85.19	-89.06	158.16	-2,937.52	4,317.08	4,217.23	99.85	43.237	
10,950.00	10,826.44	12,542.00	7,916.32	38.31	85.19	-89.41	158.16	-2,937.52	4,326.74	4,226.96	99.78	43.364	
10,975.00	10,840.33	12,542.00	7,916.32	38.34	85.19	-89.78	158.16	-2,937.52	4,335.81	4,236.09	99.72	43.482	
11,000.00	10,853.11	12,542.00	7,916.32	38.37	85.19	-90.16	158.16	-2,937.52	4,344.26	4,244.60	99.66	43.589	
11,025.00	10,864.75	12,542.00	7,916.32	38.41	85.19	-90.55	158.16	-2,937.52	4,352.09	4,252.47	99.62	43.685	
11,050.00	10,875.22	12,542.00	7,916.32	38.47	85.19	-90.95	158.16	-2,937.52	4,359.27	4,259.68	99.59	43.771	
11,075.00	10,884.48	12,542.00	7,916.32	38.54	85.19	-91.36	158.16	-2,937.52	4,365.78	4,266.21	99.57	43.845	
11,100.00	10,892.52	12,542.00	7,916.32	38.61	85.19	-91.78	158.16	-2,937.52	4,371.61	4,272.05	99.56	43.908	
11,125.00	10,899.30	12,542.00	7,916.32	38.69	85.19	-92.20	158.16	-2,937.52	4,376.75	4,277.19	99.56	43.959	
11,150.00	10,904.82	12,542.00	7,916.32	38.76	85.19	-92.63	158.16	-2,937.52	4,381.19	4,281.61	99.58	43.998	
11,175.00	10,909.05	12,542.00	7,916.32	38.83	85.19	-93.07	158.16	-2,937.52	4,384.90	4,285.30	99.60	44.025	
11,200.00	10,911.99	12,542.00	7,916.32	38.91	85.19	-93.50	158.16	-2,937.52	4,387.90	4,288.26	99.64	44.039	
11,225.00	10,913.63	12,542.00	7,916.32	38.98	85.19	-93.94	158.16	-2,937.52	4,390.16	4,290.48	99.68	44.042	
11,243.77	10,914.00	12,542.00	7,916.32	39.04	85.19	-94.27	158.16	-2,937.52	4,391.38	4,291.65	99.72	44.035	
11,300.00	10,914.00	11,300.00	7,917.00	39.22	65.53	-93.55	254.94	-2,945.30	4,394.54	4,310.52	84.02	52.304	
11,400.00	10,914.00	12,304.00	7,919.19	39.58	81.42	-92.83	395.52	-2,954.42	4,398.01	4,300.83	97.18	45.254	
11,500.00	10,914.00	12,249.01	7,920.38	40.01	80.56	-93.62	450.34	-2,958.59	4,402.04	4,305.18	96.86	45.447	
11,600.00	10,914.00	12,208.00	7,921.20	40.50	79.91	-94.65	491.19	-2,962.12	4,407.14	4,310.38	96.76	45.548	
11,700.00	10,914.00	12,149.40	7,921.67	41.04	78.98	-95.36	549.54	-2,967.43	4,413.32	4,316.85	96.48	45.745	
11,800.00	10,914.00	12,094.67	7,920.97	41.65	78.12	-96.14	604.04	-2,972.39	4,420.72	4,324.45	96.27	45.919	
11,900.00	10,914.00	11,700.12	7,924.84	42.31	71.95	-91.03	997.15	-3,003.36	4,427.39	4,335.43	91.95	48.149	
12,000.00	10,914.00	11,662.10	7,926.82	43.02	71.36	-92.10	1,035.02	-3,006.16	4,429.29	4,337.19	92.10	48.094	
12,100.00	10,914.00	11,560.86	7,931.14	43.78	69.80	-92.09	1,135.83	-3,014.36	4,432.39	4,340.87	91.52	48.432	
12,200.00	10,914.00	11,466.17	7,935.01	44.60	68.34	-92.18	1,230.20	-3,021.10	4,434.89	4,343.84	91.05	48.706	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	41H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design — RDX Federal 17 - 25H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 181-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
12,300.00	10,914.00	11,406.43	7,937.04	45.45	67.42	-92.87	1,289.75	-3,025.43	4,437.99	4,346.95	91.04	48.746	
12,400.00	10,914.00	11,364.99	7,937.77	46.35	66.79	-93.87	1,331.09	-3,028.34	4,442.13	4,350.86	91.27	48.669	
12,500.00	10,914.00	11,136.61	7,935.58	47.29	63.35	-91.67	1,559.24	-3,036.96	4,445.25	4,356.04	89.21	49.829	
12,600.00	10,914.00	11,066.00	7,935.08	48.27	62.29	-92.17	1,629.81	-3,039.18	4,447.85	4,358.71	89.14	49.896	
12,700.00	10,914.00	10,971.00	7,934.91	49.28	60.88	-92.26	1,724.74	-3,042.99	4,450.83	4,362.01	88.82	50.111	
12,800.00	10,914.00	10,912.60	7,935.17	50.33	60.01	-92.97	1,783.06	-3,045.81	4,454.06	4,365.09	88.97	50.060	
12,900.00	10,914.00	10,848.47	7,935.80	51.41	59.06	-93.58	1,847.05	-3,050.12	4,458.29	4,369.19	89.10	50.039	
13,000.00	10,914.00	10,594.00	7,942.75	52.52	55.34	-90.95	2,100.99	-3,063.86	4,459.35	4,372.29	87.06	51.221	
13,100.00	10,914.00	10,554.98	7,943.97	53.66	54.78	-91.98	2,139.92	-3,066.35	4,461.47	4,373.91	87.55	50.957	
13,200.00	10,914.00	10,469.34	7,946.50	54.82	53.54	-92.23	2,225.38	-3,071.30	4,463.81	4,376.27	87.53	50.996	
13,300.00	10,914.00	10,403.00	7,948.17	56.01	52.59	-92.80	2,291.52	-3,076.10	4,467.32	4,379.56	87.76	50.905	
13,400.00	10,914.00	10,053.54	7,959.08	57.22	47.73	-88.58	2,640.38	-3,089.88	4,468.23	4,383.37	84.86	52.654	
13,500.00	10,914.00	9,999.48	7,960.46	58.46	47.01	-89.36	2,694.42	-3,090.09	4,466.72	4,381.43	85.29	52.372	
13,600.00	10,914.00	9,930.00	7,962.03	59.71	46.08	-89.88	2,763.87	-3,091.29	4,466.30	4,380.74	85.57	52.197	
13,613.74	10,914.00	9,930.00	7,962.03	59.89	46.08	-90.11	2,763.87	-3,091.29	4,466.28	4,380.57	85.71	52.108	
13,700.00	10,914.00	9,881.94	7,963.16	60.98	45.45	-90.75	2,811.90	-3,092.73	4,466.74	4,380.64	86.10	51.876	
13,800.00	10,914.00	9,813.37	7,964.93	62.27	44.54	-91.29	2,880.39	-3,095.47	4,467.95	4,381.50	86.44	51.687	
13,900.00	10,914.00	9,740.00	7,967.09	63.58	43.59	-91.74	2,953.62	-3,099.32	4,469.87	4,383.11	86.76	51.520	
14,000.00	10,914.00	9,686.17	7,968.83	64.91	42.89	-92.51	3,007.31	-3,102.86	4,472.59	4,385.29	87.30	51.232	
14,100.00	10,914.00	9,562.21	7,973.52	66.24	41.31	-92.11	3,130.81	-3,112.50	4,476.03	4,388.83	87.19	51.335	
14,200.00	10,914.00	9,519.21	7,975.27	67.60	40.78	-93.07	3,173.64	-3,115.79	4,479.22	4,391.34	87.88	50.968	
14,300.00	10,914.00	9,486.08	7,976.19	68.96	40.37	-94.18	3,206.64	-3,118.65	4,483.91	4,395.24	88.67	50.570	
14,400.00	10,914.00	9,456.00	7,976.67	70.34	40.00	-95.35	3,236.57	-3,121.52	4,490.08	4,400.61	89.48	50.181	
14,500.00	10,914.00	9,405.99	7,977.12	71.73	39.40	-96.17	3,286.29	-3,126.85	4,497.57	4,407.45	90.12	49.906	
14,600.00	10,914.00	9,359.36	7,977.43	73.13	38.84	-97.05	3,332.58	-3,132.48	4,506.26	4,415.46	90.80	49.628	
14,700.00	10,914.00	9,246.18	7,979.19	74.54	37.51	-96.82	3,444.72	-3,147.65	4,515.42	4,424.44	90.98	49.630	
14,800.00	10,914.00	8,938.40	7,979.74	75.96	34.23	-93.39	3,750.90	-3,177.08	4,523.36	4,433.63	89.73	50.412	
14,900.00	10,914.00	8,547.77	7,985.04	77.39	30.84	-88.61	4,141.08	-3,185.82	4,522.67	4,434.45	88.22	51.267	
15,000.00	10,914.00	8,510.00	7,986.65	78.83	30.55	-89.63	4,178.80	-3,186.88	4,521.58	4,432.39	89.19	50.697	
15,028.84	10,914.00	8,510.00	7,986.65	79.25	30.55	-90.11	4,178.80	-3,186.88	4,521.49	4,431.96	89.53	50.503	
15,100.00	10,914.00	8,510.00	7,986.65	80.28	30.55	-91.28	4,178.80	-3,186.88	4,522.05	4,431.68	90.37	50.041	
15,200.00	10,914.00	8,465.27	7,988.16	81.73	30.25	-92.19	4,223.44	-3,189.21	4,524.02	4,432.70	91.33	49.537	
15,300.00	10,914.00	8,415.00	7,989.38	83.19	29.90	-93.00	4,273.56	-3,192.93	4,527.70	4,435.44	92.26	49.074	
15,400.00	10,914.00	8,393.44	7,989.77	84.66	29.77	-94.28	4,295.03	-3,194.80	4,532.61	4,439.27	93.34	48.560	
15,500.00	10,914.00	8,338.75	7,990.47	86.14	29.44	-95.02	4,349.49	-3,199.81	4,538.73	4,444.44	94.29	48.135	
15,600.00	10,914.00	8,286.10	7,990.54	87.62	29.15	-95.79	4,401.90	-3,204.81	4,545.86	4,450.59	95.27	47.717	
15,700.00	10,914.00	8,225.00	7,988.72	89.11	28.82	-96.41	4,462.75	-3,209.98	4,554.06	4,457.85	96.21	47.335	
15,732.03	10,914.00	8,225.00	7,988.72	89.59	28.82	-96.93	4,462.75	-3,209.98	4,556.90	4,460.33	96.57	47.187	

Company:	WPX Energy	Local Co-ordinate Reference:	Well 41H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	41H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design RDX Federal 17 - 35H - 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	-31.45	4,943.00	-3,022.60	5,794.03				
100.00	100.00	63.00	63.00	0.13	0.08	-31.45	4,943.00	-3,022.60	5,793.91	5,793.69	0.22	N/A	
200.00	200.00	163.00	163.00	0.49	0.36	-31.45	4,943.00	-3,022.60	5,793.91	5,793.05	0.85	6,791.094	
300.00	300.00	263.00	263.00	0.85	0.72	-31.45	4,943.00	-3,022.60	5,793.91	5,792.34	1.57	3,690.138	
400.00	400.00	363.00	363.00	1.21	1.08	-31.45	4,943.00	-3,022.60	5,793.91	5,791.62	2.29	2,533.355	
500.00	500.00	463.00	463.00	1.57	1.44	-31.45	4,943.00	-3,022.60	5,793.91	5,790.90	3.00	1,928.736	
600.00	600.00	563.00	563.00	1.93	1.79	-31.45	4,943.00	-3,022.60	5,793.91	5,790.19	3.72	1,557.111	
700.00	700.00	663.00	663.00	2.29	2.15	-31.45	4,943.00	-3,022.60	5,793.91	5,789.47	4.44	1,305.558	
800.00	800.00	763.00	763.00	2.64	2.51	-31.45	4,943.00	-3,022.60	5,793.91	5,788.75	5.15	1,123.978	
900.00	900.00	863.00	863.00	3.00	2.87	-31.45	4,943.00	-3,022.60	5,793.91	5,788.04	5.87	986.740	
1,000.00	1,000.00	963.00	963.00	3.36	3.23	-31.45	4,943.00	-3,022.60	5,793.91	5,787.32	6.59	879.369	
1,100.00	1,100.00	1,063.00	1,063.00	3.72	3.59	-31.45	4,943.00	-3,022.60	5,793.91	5,786.60	7.31	793.072	
1,200.00	1,200.00	1,163.00	1,163.00	4.08	3.94	-31.45	4,943.00	-3,022.60	5,793.91	5,785.88	8.02	722.199	
1,300.00	1,300.00	1,263.00	1,263.00	4.44	4.30	-31.45	4,943.00	-3,022.60	5,793.91	5,785.17	8.74	662.954	
1,400.00	1,400.00	1,363.00	1,363.00	4.79	4.66	-31.45	4,943.00	-3,022.60	5,793.91	5,784.45	9.46	612.692	
1,500.00	1,500.00	1,463.00	1,463.00	5.15	5.02	-31.45	4,943.00	-3,022.60	5,793.91	5,783.73	10.17	569.514	
1,600.00	1,600.00	1,563.00	1,563.00	5.51	5.38	-31.45	4,943.00	-3,022.60	5,793.91	5,783.02	10.89	532.021	
1,700.00	1,700.00	1,663.00	1,663.00	5.87	5.74	-31.45	4,943.00	-3,022.60	5,793.91	5,782.30	11.61	499.160	
1,800.00	1,800.00	1,763.00	1,763.00	6.23	6.10	-31.45	4,943.00	-3,022.60	5,793.91	5,781.58	12.32	470.122	
1,900.00	1,900.00	1,863.00	1,863.00	6.59	6.45	-31.45	4,943.00	-3,022.60	5,793.91	5,780.87	13.04	444.277	
2,000.00	2,000.00	1,963.00	1,963.00	6.95	6.81	-31.45	4,943.00	-3,022.60	5,793.91	5,780.15	13.76	421.126	
2,100.00	2,100.00	2,063.00	2,063.00	7.30	7.17	-31.45	4,943.00	-3,022.60	5,793.91	5,779.43	14.48	400.268	
2,200.00	2,200.00	2,163.00	2,163.00	7.66	7.53	-31.45	4,943.00	-3,022.60	5,793.91	5,778.72	15.19	381.378	
2,300.00	2,300.00	2,263.00	2,263.00	8.02	7.89	-31.45	4,943.00	-3,022.60	5,793.91	5,778.00	15.91	364.191	
2,400.00	2,400.00	2,363.00	2,363.00	8.38	8.25	-31.45	4,943.00	-3,022.60	5,793.91	5,777.28	16.63	348.487	
2,500.00	2,500.00	2,463.00	2,463.00	8.74	8.61	-31.45	4,943.00	-3,022.60	5,793.91	5,776.56	17.34	334.080	
2,600.00	2,600.00	2,563.00	2,563.00	9.10	8.96	-31.45	4,943.00	-3,022.60	5,793.91	5,775.85	18.06	320.818	
2,700.00	2,700.00	2,663.00	2,663.00	9.45	9.32	-31.45	4,943.00	-3,022.60	5,793.91	5,775.13	18.78	308.568	
2,800.00	2,800.00	2,763.00	2,763.00	9.81	9.68	-31.45	4,943.00	-3,022.60	5,793.91	5,774.41	19.49	297.220	
2,900.00	2,900.00	2,863.00	2,863.00	10.17	10.04	-31.45	4,943.00	-3,022.60	5,793.91	5,773.70	20.21	286.676	
3,000.00	3,000.00	2,963.00	2,963.00	10.53	10.40	-31.45	4,943.00	-3,022.60	5,793.91	5,772.98	20.93	276.855	
3,100.00	3,100.00	3,063.00	3,063.00	10.89	10.76	-31.45	4,943.00	-3,022.60	5,793.91	5,772.26	21.64	267.685	
3,200.00	3,200.00	3,163.00	3,163.00	11.25	11.11	-31.45	4,943.00	-3,022.60	5,793.91	5,771.55	22.36	259.102	
3,300.00	3,300.00	3,263.00	3,263.00	11.61	11.47	-31.45	4,943.00	-3,022.60	5,793.91	5,770.83	23.08	251.053	
3,400.00	3,400.00	3,363.00	3,363.00	11.96	11.83	-31.45	4,943.00	-3,022.60	5,793.91	5,770.11	23.80	243.489	
3,500.00	3,500.00	3,463.00	3,463.00	12.32	12.19	-31.45	4,943.00	-3,022.60	5,793.91	5,769.39	24.51	236.367	
3,509.91	3,509.91	3,472.91	3,472.91	12.36	12.23	-31.45	4,943.00	-3,022.60	5,793.91	5,769.32	24.58	235.684	
3,600.00	3,600.00	3,500.00	3,500.00	12.68	12.32	-31.45	4,943.00	-3,022.60	5,794.25	5,769.25	25.00	231.751	
3,700.00	3,700.00	3,554.45	3,554.44	13.04	12.51	-31.45	4,943.13	-3,023.37	5,795.43	5,769.88	25.55	226.835	
3,755.00	3,755.00	3,600.00	3,599.95	13.24	12.67	-31.46	4,943.44	-3,025.18	5,796.83	5,770.92	25.91	223.769	
3,800.00	3,800.00	3,600.00	3,599.95	13.39	12.67	-31.47	4,943.44	-3,025.18	5,798.37	5,772.31	26.06	222.531	
3,900.00	3,899.86	3,600.00	3,599.95	13.73	12.67	-31.49	4,943.44	-3,025.18	5,806.21	5,779.84	26.37	220.143	
4,000.00	3,999.33	3,653.75	3,653.58	14.06	12.86	-31.57	4,944.03	-3,028.70	5,819.39	5,792.50	26.89	216.454	
4,088.21	4,086.53	3,700.00	3,699.63	14.36	13.02	-31.68	4,944.75	-3,032.92	5,835.73	5,808.40	27.33	213.530	
4,100.00	4,098.13	3,700.00	3,699.63	14.40	13.02	-31.69	4,944.75	-3,032.92	5,838.16	5,810.79	27.37	213.327	
4,200.00	4,196.62	3,700.00	3,699.63	14.75	13.02	-31.78	4,944.75	-3,032.92	5,859.69	5,832.02	27.67	211.773	
4,300.00	4,295.10	3,749.13	3,748.42	15.10	13.19	-31.91	4,945.71	-3,038.60	5,882.22	5,854.06	28.16	208.911	
4,400.00	4,393.58	3,800.00	3,798.77	15.46	13.37	-32.06	4,946.93	-3,045.78	5,906.03	5,877.38	28.65	206.141	
4,500.00	4,492.06	3,811.06	3,809.68	15.83	13.41	-32.16	4,947.22	-3,047.52	5,930.74	5,901.75	28.99	204.600	
4,600.00	4,590.54	3,858.81	3,856.73	16.20	13.58	-32.31	4,948.58	-3,055.57	5,956.60	5,927.13	29.47	202.140	
4,700.00	4,689.02	3,952.90	3,949.40	16.57	13.92	-32.51	4,951.31	-3,071.68	5,982.80	5,952.66	30.14	198.503	
4,800.00	4,787.51	4,047.00	4,042.06	16.95	14.26	-32.72	4,954.04	-3,087.78	6,009.08	5,978.27	30.82	194.997	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 35H - 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	9,872.05	16,469.56	11,633.00	35.22	91.61	-87.75	4.40	-3,575.20	4,279.23	4,162.43	116.80	36.637	
10,000.00	9,972.05	16,469.56	11,633.00	35.57	91.61	-87.75	4.40	-3,575.20	4,238.19	4,120.19	118.00	35.917	
10,100.00	10,072.05	16,469.56	11,633.00	35.93	91.61	-87.75	4.40	-3,575.20	4,199.12	4,079.94	119.18	35.233	
10,200.00	10,172.05	16,469.56	11,633.00	36.28	91.61	-87.75	4.40	-3,575.20	4,162.10	4,041.75	120.34	34.586	
10,300.00	10,272.05	16,469.56	11,633.00	36.63	91.61	-87.75	4.40	-3,575.20	4,127.16	4,005.69	121.47	33.976	
10,393.77	10,365.82	16,469.56	11,633.00	36.96	91.61	-87.75	4.40	-3,575.20	4,096.35	3,973.84	122.51	33.437	
10,400.00	10,372.05	16,469.56	11,633.00	36.98	91.61	-87.75	4.40	-3,575.20	4,094.37	3,971.79	122.58	33.402	
10,425.00	10,397.03	16,469.56	11,633.00	37.07	91.61	-87.77	4.40	-3,575.20	4,086.48	3,963.63	122.85	33.265	
10,450.00	10,421.92	16,469.56	11,633.00	37.16	91.61	-87.80	4.40	-3,575.20	4,078.71	3,955.60	123.11	33.131	
10,475.00	10,446.66	16,469.56	11,633.00	37.24	91.61	-87.86	4.40	-3,575.20	4,071.07	3,947.70	123.37	33.000	
10,500.00	10,471.18	16,469.56	11,633.00	37.33	91.61	-87.93	4.40	-3,575.20	4,063.59	3,939.97	123.62	32.872	
10,525.00	10,495.41	16,469.56	11,633.00	37.41	91.61	-88.02	4.40	-3,575.20	4,056.29	3,932.42	123.86	32.748	
10,550.00	10,519.28	16,469.56	11,633.00	37.48	91.61	-88.13	4.40	-3,575.20	4,049.19	3,925.09	124.10	32.629	
10,575.00	10,542.73	16,469.56	11,633.00	37.56	91.61	-88.25	4.40	-3,575.20	4,042.30	3,917.98	124.33	32.514	
10,600.00	10,565.70	16,469.56	11,633.00	37.63	91.61	-88.40	4.40	-3,575.20	4,035.67	3,911.12	124.54	32.403	
10,625.00	10,588.12	16,469.56	11,633.00	37.70	91.61	-88.56	4.40	-3,575.20	4,029.29	3,904.53	124.75	32.298	
10,650.00	10,609.93	16,469.56	11,633.00	37.76	91.61	-88.74	4.40	-3,575.20	4,023.19	3,898.23	124.95	32.197	
10,675.00	10,631.07	16,469.56	11,633.00	37.83	91.61	-88.94	4.40	-3,575.20	4,017.38	3,892.24	125.14	32.102	
10,700.00	10,651.49	16,469.56	11,633.00	37.88	91.61	-89.15	4.40	-3,575.20	4,011.89	3,886.57	125.32	32.012	
10,725.00	10,671.12	16,469.56	11,633.00	37.94	91.61	-89.38	4.40	-3,575.20	4,006.73	3,881.24	125.49	31.928	
10,750.00	10,689.91	16,469.56	11,633.00	37.98	91.61	-89.63	4.40	-3,575.20	4,001.92	3,876.27	125.65	31.849	
10,768.77	10,703.44	16,469.56	11,633.00	38.02	91.61	-89.82	4.40	-3,575.20	3,998.54	3,872.78	125.76	31.794	
10,800.00	10,725.52	16,469.89	11,633.00	38.07	91.62	-90.15	4.08	-3,575.20	3,993.21	3,867.27	125.95	31.705	
10,868.77	10,774.15	16,421.26	11,633.00	38.18	90.90	-90.15	52.70	-3,575.32	3,982.03	3,856.31	125.72	31.675	
10,875.00	10,778.53	16,416.82	11,633.00	38.19	90.84	-90.15	57.14	-3,575.34	3,981.05	3,855.35	125.70	31.672	
10,900.00	10,795.50	16,401.53	11,633.00	38.24	90.61	-90.15	75.49	-3,575.38	3,977.29	3,851.65	125.64	31.656	
10,925.00	10,811.48	16,379.25	11,633.00	38.27	90.28	-90.15	94.71	-3,575.43	3,973.82	3,848.35	125.48	31.670	
10,950.00	10,826.44	16,359.22	11,633.00	38.31	89.99	-90.15	114.74	-3,575.49	3,970.63	3,845.29	125.34	31.679	
10,975.00	10,840.33	16,338.44	11,633.00	38.34	89.69	-90.15	135.52	-3,575.54	3,967.72	3,842.54	125.18	31.696	
11,000.00	10,853.11	16,316.96	11,633.00	38.37	89.37	-90.15	157.00	-3,575.59	3,965.08	3,840.07	125.01	31.719	
11,025.00	10,864.75	16,305.17	11,633.00	38.41	89.20	-90.15	179.13	-3,575.65	3,962.71	3,837.75	124.97	31.710	
11,050.00	10,875.22	16,272.13	11,633.00	38.47	88.71	-90.15	201.83	-3,575.71	3,960.61	3,836.00	124.61	31.783	
11,075.00	10,884.48	16,248.92	11,633.00	38.54	88.38	-90.15	225.04	-3,575.77	3,958.78	3,834.39	124.39	31.824	
11,100.00	10,892.52	16,225.25	11,633.00	38.61	88.03	-90.15	248.71	-3,575.83	3,957.21	3,833.05	124.16	31.871	
11,125.00	10,899.30	16,201.19	11,633.00	38.69	87.68	-90.15	272.77	-3,575.89	3,955.90	3,831.98	123.92	31.923	
11,150.00	10,904.82	16,176.81	11,633.00	38.76	87.32	-90.15	297.15	-3,575.96	3,954.84	3,831.18	123.67	31.980	
11,175.00	10,909.05	16,152.17	11,633.00	38.83	86.97	-90.15	321.79	-3,576.02	3,954.04	3,830.64	123.40	32.042	
11,200.00	10,911.99	16,127.35	11,633.00	38.91	86.61	-90.15	346.61	-3,576.08	3,953.49	3,830.36	123.13	32.108	
11,225.00	10,913.63	16,102.40	11,633.00	38.98	86.24	-90.15	371.56	-3,576.15	3,953.20	3,830.35	122.85	32.179	
11,242.09	10,914.00	16,085.32	11,633.00	39.03	86.00	-90.15	388.64	-3,576.19	3,953.14	3,830.48	122.66	32.229	
11,243.77	10,914.00	16,083.64	11,633.00	39.04	85.97	-90.15	390.32	-3,576.20	3,953.14	3,830.50	122.64	32.234	
11,300.00	10,914.00	16,027.41	11,633.00	39.22	85.16	-90.15	446.55	-3,576.34	3,953.18	3,831.18	122.00	32.403	
11,400.00	10,914.00	15,927.41	11,633.00	39.58	83.72	-90.15	546.55	-3,576.60	3,953.24	3,832.32	120.93	32.690	
11,500.00	10,914.00	15,827.41	11,633.00	40.01	82.29	-90.15	646.55	-3,576.86	3,953.31	3,833.38	119.93	32.964	
11,600.00	10,914.00	15,727.41	11,633.00	40.50	80.86	-90.15	746.55	-3,577.12	3,953.38	3,834.38	119.00	33.222	
11,700.00	10,914.00	15,627.41	11,633.00	41.04	79.45	-90.15	846.55	-3,577.38	3,953.45	3,835.31	118.14	33.464	
11,800.00	10,914.00	15,527.41	11,633.00	41.65	78.05	-90.15	946.55	-3,577.64	3,953.51	3,836.17	117.34	33.692	
11,900.00	10,914.00	15,427.41	11,633.00	42.31	76.65	-90.15	1,046.55	-3,577.89	3,953.58	3,836.97	116.61	33.903	
12,000.00	10,914.00	15,327.41	11,633.00	43.02	75.27	-90.15	1,146.55	-3,578.15	3,953.65	3,837.70	115.95	34.099	
12,100.00	10,914.00	15,227.41	11,633.00	43.78	73.89	-90.15	1,246.55	-3,578.41	3,953.72	3,838.37	115.34	34.278	
12,200.00	10,914.00	15,127.41	11,633.00	44.60	72.53	-90.15	1,346.55	-3,578.67	3,953.78	3,838.99	114.79	34.442	
12,300.00	10,914.00	15,027.41	11,633.00	45.45	71.18	-90.15	1,446.55	-3,578.93	3,953.85	3,839.55	114.30	34.591	

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal 17 - 35H - 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
12,400.00	10,914.00	14,927.41	11,633.00	46.35	69.85	-90.15	1,546.55	-3,579.19	3,953.92	3,840.05	113.87	34.723	
12,500.00	10,914.00	14,827.41	11,633.00	47.29	68.53	-90.15	1,646.55	-3,579.45	3,953.98	3,840.50	113.49	34.841	
12,600.00	10,914.00	14,727.41	11,633.00	48.27	67.22	-90.15	1,746.55	-3,579.70	3,954.05	3,840.89	113.16	34.943	
12,700.00	10,914.00	14,627.41	11,633.00	49.28	65.93	-90.15	1,846.55	-3,579.96	3,954.12	3,841.24	112.88	35.030	
12,800.00	10,914.00	14,527.41	11,633.00	50.33	64.65	-90.15	1,946.55	-3,580.22	3,954.19	3,841.54	112.65	35.102	
12,900.00	10,914.00	14,427.41	11,633.00	51.41	63.39	-90.15	2,046.54	-3,580.48	3,954.25	3,841.78	112.47	35.159	
13,000.00	10,914.00	14,327.41	11,633.00	52.52	62.15	-90.15	2,146.54	-3,580.74	3,954.32	3,841.98	112.34	35.201	
13,100.00	10,914.00	14,227.41	11,633.00	53.66	60.94	-90.15	2,246.54	-3,581.00	3,954.39	3,842.14	112.25	35.228	
13,200.00	10,914.00	14,127.41	11,633.00	54.82	59.74	-90.15	2,346.54	-3,581.26	3,954.46	3,842.24	112.21	35.241	
13,300.00	10,914.00	14,027.41	11,633.00	56.01	58.56	-90.15	2,446.54	-3,581.51	3,954.52	3,842.31	112.22	35.240	
13,400.00	10,914.00	13,927.41	11,633.00	57.22	57.41	-90.15	2,546.54	-3,581.77	3,954.59	3,842.32	112.27	35.224	
13,500.00	10,914.00	13,827.41	11,633.00	58.46	56.28	-90.15	2,646.54	-3,582.03	3,954.66	3,842.29	112.37	35.194	
13,600.00	10,914.00	13,727.41	11,633.00	59.71	55.18	-90.15	2,746.54	-3,582.29	3,954.72	3,842.21	112.51	35.149	
13,700.00	10,914.00	13,627.41	11,633.00	60.98	54.11	-90.15	2,846.54	-3,582.55	3,954.79	3,842.09	112.70	35.090	
13,800.00	10,914.00	13,527.41	11,633.00	62.27	53.06	-90.15	2,946.54	-3,582.81	3,954.86	3,841.91	112.94	35.016	
13,900.00	10,914.00	13,427.41	11,633.00	63.58	52.05	-90.15	3,046.54	-3,583.07	3,954.93	3,841.69	113.23	34.928	
14,000.00	10,914.00	13,327.41	11,633.00	64.91	51.07	-90.15	3,146.54	-3,583.32	3,954.99	3,841.43	113.57	34.825	
14,100.00	10,914.00	13,227.41	11,633.00	66.24	50.13	-90.15	3,246.54	-3,583.58	3,955.06	3,841.11	113.95	34.707	
14,200.00	10,914.00	13,127.41	11,633.00	67.60	49.23	-90.15	3,346.54	-3,583.84	3,955.13	3,840.74	114.39	34.575	
14,300.00	10,914.00	13,027.41	11,633.00	68.96	48.36	-90.15	3,446.54	-3,584.10	3,955.19	3,840.31	114.88	34.428	
14,400.00	10,914.00	12,927.41	11,633.00	70.34	47.54	-90.15	3,546.54	-3,584.36	3,955.26	3,839.83	115.43	34.266	
14,500.00	10,914.00	12,827.41	11,633.00	71.73	46.76	-90.15	3,646.54	-3,584.62	3,955.33	3,839.30	116.03	34.089	
14,600.00	10,914.00	12,727.41	11,633.00	73.13	46.02	-90.15	3,746.54	-3,584.88	3,955.40	3,838.71	116.69	33.897	
14,700.00	10,914.00	12,627.41	11,633.00	74.54	45.34	-90.15	3,846.54	-3,585.13	3,955.46	3,838.06	117.40	33.691	
14,800.00	10,914.00	12,527.41	11,633.00	75.96	44.70	-90.15	3,946.54	-3,585.39	3,955.53	3,837.35	118.18	33.470	
14,900.00	10,914.00	12,427.41	11,633.00	77.39	44.12	-90.15	4,046.54	-3,585.65	3,955.60	3,836.57	119.02	33.234	
15,000.00	10,914.00	12,327.41	11,633.00	78.83	43.60	-90.15	4,146.54	-3,585.91	3,955.67	3,835.74	119.93	32.983	
15,100.00	10,914.00	12,227.41	11,633.00	80.28	43.13	-90.15	4,246.54	-3,586.17	3,955.73	3,834.83	120.90	32.719	
15,200.00	10,914.00	10,925.49	10,877.00	81.73	39.67	-80.04	5,038.81	-3,588.22	3,944.12	3,824.39	119.73	32.942	
15,300.00	10,914.00	10,925.49	10,877.00	83.19	39.67	-81.48	5,038.81	-3,588.22	3,927.87	3,806.52	121.35	32.367	
15,400.00	10,914.00	10,925.49	10,877.00	84.66	39.67	-82.92	5,038.81	-3,588.22	3,914.11	3,791.15	122.96	31.833	
15,500.00	10,914.00	10,925.49	10,877.00	86.14	39.67	-84.38	5,038.81	-3,588.22	3,902.86	3,778.32	124.54	31.338	
15,600.00	10,914.00	10,925.49	10,877.00	87.62	39.67	-85.84	5,038.81	-3,588.22	3,894.15	3,768.05	126.10	30.882	
15,700.00	10,914.00	10,925.49	10,877.00	89.11	39.67	-87.31	5,038.81	-3,588.22	3,887.99	3,760.37	127.62	30.465	
15,732.03	10,914.00	10,925.49	10,877.00	89.59	39.67	-87.79	5,038.81	-3,588.22	3,886.56	3,758.46	128.10	30.340	CC, ES, SF

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal COM 17 - 40H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 158-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	0.93	4,941.90	80.30	4,942.61				
100.00	100.00	70.49	70.49	0.13	0.11	0.93	4,941.94	80.37	4,942.59	4,942.35	0.24	N/A	
200.00	200.00	164.14	164.14	0.49	0.26	0.94	4,942.11	80.70	4,942.78	4,942.03	0.75	6,561.315	
300.00	300.00	273.03	273.03	0.85	0.65	0.94	4,942.26	81.28	4,942.93	4,941.43	1.50	3,292.555	
400.00	400.00	383.13	383.12	1.21	1.04	0.95	4,942.21	82.00	4,942.89	4,940.64	2.25	2,194.799	
500.00	500.00	495.14	495.14	1.57	1.44	0.96	4,941.90	82.53	4,942.63	4,939.62	3.01	1,643.361	
600.00	600.00	612.28	612.28	1.93	1.85	0.96	4,941.24	82.95	4,942.07	4,938.29	3.78	1,307.551	
700.00	700.00	724.14	724.12	2.29	2.25	0.97	4,940.24	83.39	4,941.18	4,936.65	4.53	1,090.124	
800.00	800.00	826.54	826.52	2.64	2.61	0.97	4,939.22	83.62	4,940.18	4,934.93	5.25	940.625	
900.00	900.00	951.05	951.02	3.00	3.05	0.97	4,937.74	83.91	4,939.02	4,932.97	6.05	816.192	
1,000.00	1,000.00	1,080.48	1,080.42	3.36	3.51	0.99	4,935.24	85.56	4,937.08	4,930.21	6.87	718.641	
1,100.00	1,100.00	1,163.02	1,162.93	3.72	3.81	1.01	4,933.61	87.25	4,935.14	4,927.62	7.52	655.863	
1,200.00	1,200.00	1,245.17	1,245.04	4.08	4.11	1.04	4,932.27	89.14	4,933.56	4,925.38	8.18	603.268	
1,300.00	1,300.00	1,335.41	1,335.25	4.44	4.43	1.06	4,931.10	90.99	4,932.29	4,923.43	8.86	556.663	
1,400.00	1,400.00	1,430.07	1,429.89	4.79	4.77	1.08	4,929.98	92.80	4,931.14	4,921.58	9.56	515.880	
1,500.00	1,500.00	1,522.49	1,522.29	5.15	5.10	1.10	4,929.00	94.33	4,930.12	4,919.87	10.25	481.041	
1,600.00	1,600.00	1,617.05	1,616.84	5.51	5.44	1.11	4,928.16	95.41	4,929.25	4,918.30	10.95	450.301	
1,700.00	1,700.00	1,707.18	1,706.96	5.87	5.77	1.12	4,927.45	96.47	4,928.50	4,916.87	11.63	423.842	
1,800.00	1,800.00	1,808.76	1,808.53	6.23	6.13	1.14	4,926.85	97.84	4,927.93	4,915.58	12.35	399.003	
1,900.00	1,900.00	1,894.06	1,893.83	6.59	6.44	1.15	4,926.30	98.63	4,927.32	4,914.31	13.01	378.614	
1,973.80	1,973.80	1,950.03	1,949.80	6.85	6.63	1.15	4,926.21	98.96	4,927.21	4,913.73	13.48	365.600	
2,000.00	2,000.00	1,973.79	1,973.55	6.95	6.72	1.15	4,926.22	99.05	4,927.21	4,913.56	13.65	360.887	
2,100.00	2,100.00	2,068.44	2,068.21	7.30	7.04	1.15	4,926.34	99.18	4,927.34	4,913.00	14.34	343.682	
2,200.00	2,200.00	2,184.80	2,184.56	7.66	7.44	1.16	4,926.41	99.34	4,927.42	4,912.32	15.10	326.357	
2,300.00	2,300.00	2,283.06	2,282.82	8.02	7.79	1.16	4,926.14	99.71	4,927.16	4,911.35	15.81	311.741	
2,340.81	2,340.81	2,317.36	2,317.12	8.17	7.91	1.16	4,926.12	99.88	4,927.13	4,911.05	16.07	306.529	
2,400.00	2,400.00	2,363.78	2,363.54	8.38	8.08	1.16	4,926.17	100.05	4,927.20	4,910.76	16.45	299.595	
2,500.00	2,500.00	2,451.19	2,450.95	8.74	8.37	1.16	4,926.56	100.04	4,927.64	4,910.53	17.10	288.130	
2,600.00	2,600.00	2,552.15	2,551.90	9.10	8.71	1.16	4,927.06	99.90	4,928.14	4,910.34	17.80	276.876	
2,700.00	2,700.00	2,652.60	2,652.36	9.45	9.05	1.16	4,927.55	99.66	4,928.62	4,910.12	18.49	266.491	
2,800.00	2,800.00	2,770.81	2,770.57	9.81	9.44	1.15	4,927.99	99.09	4,928.99	4,909.74	19.25	256.055	
2,900.00	2,900.00	2,864.16	2,863.91	10.17	9.76	1.15	4,928.11	98.95	4,929.11	4,909.19	19.93	247.343	
3,000.00	3,000.00	3,006.74	3,006.49	10.53	10.27	1.16	4,927.80	100.12	4,928.91	4,908.12	20.79	237.064	
3,100.00	3,100.00	3,109.88	3,109.62	10.89	10.64	1.18	4,927.16	101.08	4,928.31	4,906.80	21.52	229.035	
3,200.00	3,200.00	3,218.13	3,217.86	11.25	11.02	1.19	4,926.24	102.54	4,927.49	4,905.23	22.26	221.335	
3,300.00	3,300.00	3,321.45	3,321.14	11.61	11.39	1.22	4,925.32	104.85	4,926.64	4,903.65	22.99	214.291	
3,400.00	3,400.00	3,406.96	3,406.64	11.96	11.70	1.24	4,924.54	106.49	4,925.79	4,902.13	23.65	208.235	
3,500.00	3,500.00	3,486.77	3,486.43	12.32	11.98	1.26	4,924.21	108.11	4,925.41	4,901.11	24.30	202.701	
3,600.00	3,600.00	3,582.02	3,581.66	12.68	12.33	1.28	4,924.04	110.13	4,925.28	4,900.28	25.00	197.026	
3,684.18	3,684.18	3,660.61	3,660.18	12.98	12.61	1.32	4,923.87	113.42	4,925.17	4,899.59	25.58	192.529	
3,700.00	3,700.00	3,671.14	3,670.69	13.04	12.64	1.33	4,923.86	114.02	4,925.18	4,899.51	25.68	191.821	
3,755.00	3,755.00	3,707.68	3,707.15	13.24	12.78	1.35	4,923.91	116.43	4,925.34	4,899.34	26.00	189.407	
3,800.00	3,800.00	3,740.00	3,739.37	13.39	12.89	1.38	4,924.06	118.99	4,925.85	4,899.58	26.28	187.472	
3,900.00	3,899.86	3,798.88	3,797.97	13.73	13.10	1.39	4,924.63	124.59	4,929.09	4,902.27	26.82	183.790	
4,000.00	3,999.33	3,858.95	3,857.64	14.06	13.32	1.36	4,925.64	131.50	4,935.28	4,907.91	27.37	180.320	
4,088.21	4,086.53	3,910.58	3,908.79	14.36	13.51	1.30	4,926.88	138.38	4,943.20	4,915.34	27.85	177.478	
4,100.00	4,098.13	3,930.00	3,928.00	14.40	13.58	1.31	4,927.44	141.20	4,944.44	4,916.48	27.97	176.808	
4,200.00	4,196.62	4,018.03	4,015.05	14.75	13.90	1.28	4,930.02	154.05	4,954.86	4,926.23	28.63	173.054	
4,300.00	4,295.10	4,105.87	4,101.92	15.10	14.23	1.24	4,932.58	166.81	4,965.31	4,936.01	29.31	169.435	
4,400.00	4,393.58	4,190.35	4,185.39	15.46	14.54	1.21	4,935.28	179.47	4,976.04	4,946.07	29.97	166.022	
4,500.00	4,492.06	4,286.72	4,280.59	15.83	14.90	1.19	4,938.56	194.15	4,986.99	4,956.29	30.69	162.480	
4,600.00	4,590.54	4,416.46	4,408.87	16.20	15.39	1.23	4,942.70	213.04	4,997.72	4,966.17	31.55	158.389	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	MD Reference:	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	41H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design | RDX Federal COM 17 - 40H - Wellbore #1 - Surveys | Offset Site Error: 0.00 usft

Survey Program: 158-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
4,700.00	4,689.02	4,542.93	4,533.97	16.57	15.88	1.26	4,945.58	231.47	5,007.46	4,975.05	32.41	154.507	
4,800.00	4,787.51	4,618.55	4,608.60	16.95	16.17	1.21	4,947.48	243.53	5,017.53	4,984.46	33.07	151.735	
4,900.00	4,885.99	4,711.81	4,700.58	17.33	16.53	1.21	4,950.11	258.68	5,027.91	4,994.11	33.80	148.737	
5,000.00	4,984.47	4,814.08	4,801.51	17.71	16.94	1.21	4,952.88	274.94	5,038.19	5,003.61	34.58	145.688	
5,100.00	5,082.95	4,904.66	4,890.95	18.10	17.29	1.19	4,955.61	288.98	5,048.74	5,013.42	35.32	142.962	
5,200.00	5,181.43	5,031.02	5,015.96	18.49	17.79	1.22	4,958.86	307.14	5,058.79	5,022.59	36.20	139.748	
5,300.00	5,279.92	5,178.57	5,161.95	18.88	18.37	1.28	4,961.93	328.24	5,068.44	5,031.27	37.17	136.343	
5,400.00	5,378.40	5,260.00	5,242.62	19.28	18.69	1.22	4,963.29	339.30	5,077.63	5,039.76	37.88	134.050	
5,500.00	5,476.88	5,320.00	5,301.99	19.68	18.93	1.14	4,964.63	347.84	5,087.40	5,048.90	38.50	132.147	
5,600.00	5,575.36	5,398.53	5,379.59	20.08	19.24	1.10	4,966.98	359.68	5,097.90	5,058.70	39.20	130.056	
5,700.00	5,673.84	5,523.94	5,503.51	20.48	19.75	1.13	4,970.55	378.64	5,108.31	5,068.21	40.10	127.388	
5,706.73	5,680.47	5,533.42	5,512.88	20.51	19.78	1.13	4,970.79	380.02	5,108.99	5,068.82	40.17	127.199	
5,800.00	5,772.68	5,601.31	5,580.00	20.88	20.06	1.10	4,972.60	390.02	5,117.59	5,076.80	40.79	125.452	
5,900.00	5,872.18	15,471.00	10,852.70	21.25	89.73	67.86	137.43	995.93	5,060.55	5,007.51	53.04	95.417	
6,000.00	5,972.06	15,471.00	10,852.70	21.61	89.73	67.59	137.43	995.93	4,961.32	4,908.05	53.27	93.137	
6,039.95	6,012.00	15,471.00	10,852.70	21.75	89.73	67.57	137.43	995.93	4,921.80	4,868.43	53.37	92.227	
6,100.00	6,072.05	15,471.00	10,852.70	21.95	89.73	67.57	137.43	995.93	4,862.45	4,808.93	53.52	90.857	
6,200.00	6,172.05	15,471.00	10,852.70	22.30	89.73	67.57	137.43	995.93	4,763.66	4,709.89	53.78	88.584	
6,300.00	6,272.05	15,471.00	10,852.70	22.64	89.73	67.57	137.43	995.93	4,664.93	4,610.89	54.04	86.322	
6,400.00	6,372.05	15,471.00	10,852.70	22.99	89.73	67.57	137.43	995.93	4,566.25	4,511.93	54.31	84.071	
6,500.00	6,472.05	15,471.00	10,852.70	23.33	89.73	67.57	137.43	995.93	4,467.63	4,413.03	54.60	81.831	
6,600.00	6,572.05	15,471.00	10,852.70	23.68	89.73	67.57	137.43	995.93	4,369.07	4,314.18	54.89	79.604	
6,700.00	6,672.05	15,471.00	10,852.70	24.02	89.73	67.57	137.43	995.93	4,270.58	4,215.39	55.18	77.388	
6,800.00	6,772.05	15,471.00	10,852.70	24.37	89.73	67.57	137.43	995.93	4,172.16	4,116.67	55.49	75.184	
6,900.00	6,872.05	15,471.00	10,852.70	24.71	89.73	67.57	137.43	995.93	4,073.82	4,018.00	55.81	72.992	
7,000.00	6,972.05	15,471.00	10,852.70	25.06	89.73	67.57	137.43	995.93	3,975.56	3,919.41	56.14	70.813	
7,100.00	7,072.05	15,471.00	10,852.70	25.41	89.73	67.57	137.43	995.93	3,877.38	3,820.90	56.48	68.646	
7,200.00	7,172.05	15,471.00	10,852.70	25.76	89.73	67.57	137.43	995.93	3,779.31	3,722.47	56.84	66.491	
7,300.00	7,272.05	15,471.00	10,852.70	26.10	89.73	67.57	137.43	995.93	3,681.34	3,624.13	57.21	64.350	
7,400.00	7,372.05	15,471.00	10,852.70	26.45	89.73	67.57	137.43	995.93	3,583.48	3,525.89	57.59	62.221	
7,500.00	7,472.05	15,471.00	10,852.70	26.80	89.73	67.57	137.43	995.93	3,485.74	3,427.75	57.99	60.105	
7,600.00	7,572.05	15,471.00	10,852.70	27.15	89.73	67.57	137.43	995.93	3,388.14	3,329.72	58.41	58.002	
7,700.00	7,672.05	15,471.00	10,852.70	27.50	89.73	67.57	137.43	995.93	3,290.67	3,231.82	58.85	55.913	
7,800.00	7,772.05	15,471.00	10,852.70	27.85	89.73	67.57	137.43	995.93	3,193.37	3,134.05	59.32	53.837	
7,900.00	7,872.05	15,471.00	10,852.70	28.19	89.73	67.57	137.43	995.93	3,096.23	3,036.43	59.80	51.774	
8,000.00	7,972.05	15,471.00	10,852.70	28.54	89.73	67.57	137.43	995.93	2,999.29	2,938.97	60.32	49.726	
8,100.00	8,072.05	15,471.00	10,852.70	28.89	89.73	67.57	137.43	995.93	2,902.55	2,841.69	60.86	47.691	
8,200.00	8,172.05	15,471.00	10,852.70	29.24	89.73	67.57	137.43	995.93	2,806.04	2,744.60	61.44	45.671	
8,300.00	8,272.05	15,471.00	10,852.70	29.59	89.73	67.57	137.43	995.93	2,709.79	2,647.73	62.06	43.666	
8,400.00	8,372.05	15,471.00	10,852.70	29.94	89.73	67.57	137.43	995.93	2,613.81	2,551.09	62.72	41.676	
8,500.00	8,472.05	15,471.00	10,852.70	30.30	89.73	67.57	137.43	995.93	2,518.15	2,454.72	63.43	39.702	
8,600.00	8,572.05	15,471.00	10,852.70	30.65	89.73	67.57	137.43	995.93	2,422.84	2,358.65	64.19	37.744	
8,700.00	8,672.05	15,471.00	10,852.70	31.00	89.73	67.57	137.43	995.93	2,327.92	2,262.90	65.02	35.803	
8,800.00	8,772.05	15,471.00	10,852.70	31.35	89.73	67.57	137.43	995.93	2,233.45	2,167.53	65.92	33.880	
8,900.00	8,872.05	15,471.00	10,852.70	31.70	89.73	67.57	137.43	995.93	2,139.48	2,072.57	66.91	31.977	
9,000.00	8,972.05	15,471.00	10,852.70	32.05	89.73	67.57	137.43	995.93	2,046.08	1,978.09	67.99	30.096	
9,100.00	9,072.05	15,471.00	10,852.70	32.40	89.73	67.57	137.43	995.93	1,953.33	1,884.15	69.18	28.237	
9,200.00	9,172.05	15,471.00	10,852.70	32.75	89.73	67.57	137.43	995.93	1,861.34	1,790.84	70.50	26.403	
9,300.00	9,272.05	15,471.00	10,852.70	33.11	89.73	67.57	137.43	995.93	1,770.21	1,698.24	71.97	24.598	
9,400.00	9,372.05	15,471.00	10,852.70	33.46	89.73	67.57	137.43	995.93	1,680.09	1,606.48	73.61	22.825	
9,500.00	9,472.05	15,471.00	10,852.70	33.81	89.73	67.57	137.43	995.93	1,591.16	1,515.71	75.45	21.088	
9,600.00	9,572.05	15,471.00	10,852.70	34.16	89.73	67.57	137.43	995.93	1,503.61	1,426.08	77.53	19.394	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design | RDX Federal COM 17 - 40H - Wellbore #1 - Surveys | Offset Site Error: 0.00 usft

Survey Program: 158-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
9,700.00	9,672.05	15,471.00	10,852.70	34.51	89.73	67.57	137.43	995.93	1,417.72	1,337.84	79.88	17.748	
9,800.00	9,772.05	15,471.00	10,852.70	34.87	89.73	67.57	137.43	995.93	1,333.79	1,251.25	82.54	16.160	
9,900.00	9,872.05	15,471.00	10,852.70	35.22	89.73	67.57	137.43	995.93	1,252.22	1,166.67	85.55	14.637	
10,000.00	9,972.05	15,471.00	10,852.70	35.57	89.73	67.57	137.43	995.93	1,173.51	1,084.56	88.95	13.192	
10,100.00	10,072.05	15,471.00	10,852.70	35.93	89.73	67.57	137.43	995.93	1,098.27	1,005.49	92.78	11.837	
10,200.00	10,172.05	15,471.00	10,852.70	36.28	89.73	67.57	137.43	995.93	1,027.26	930.22	97.04	10.586	
10,300.00	10,272.05	15,471.00	10,852.70	36.63	89.73	67.57	137.43	995.93	961.43	859.72	101.71	9.453	
10,393.77	10,365.82	15,471.00	10,852.70	36.96	89.73	67.57	137.43	995.93	905.39	799.02	106.37	8.512	
10,400.00	10,372.05	15,471.00	10,852.70	36.98	89.73	67.57	137.43	995.93	901.88	795.19	106.69	8.453	
10,425.00	10,397.03	15,471.00	10,852.70	37.07	89.73	67.64	137.43	995.93	887.83	779.87	107.96	8.223	
10,450.00	10,421.92	15,471.00	10,852.70	37.16	89.73	67.80	137.43	995.93	873.90	764.65	109.25	7.999	
10,475.00	10,446.66	15,471.00	10,852.70	37.24	89.73	68.06	137.43	995.93	860.12	749.59	110.53	7.782	
10,500.00	10,471.18	15,471.00	10,852.70	37.33	89.73	68.41	137.43	995.93	846.55	734.73	111.81	7.571	
10,525.00	10,495.41	15,471.00	10,852.70	37.41	89.73	68.85	137.43	995.93	833.23	720.14	113.08	7.368	
10,550.00	10,519.28	15,471.00	10,852.70	37.48	89.73	69.39	137.43	995.93	820.21	705.87	114.34	7.173	
10,575.00	10,542.73	15,471.00	10,852.70	37.56	89.73	70.02	137.43	995.93	807.55	691.97	115.57	6.987	
10,600.00	10,565.70	15,471.00	10,852.70	37.63	89.73	70.74	137.43	995.93	795.29	678.51	116.78	6.810	
10,625.00	10,588.12	15,471.00	10,852.70	37.70	89.73	71.56	137.43	995.93	783.49	665.54	117.95	6.643	
10,650.00	10,609.93	15,471.00	10,852.70	37.76	89.73	72.48	137.43	995.93	772.20	653.13	119.07	6.485	
10,675.00	10,631.07	15,471.00	10,852.70	37.83	89.73	73.49	137.43	995.93	761.48	641.34	120.14	6.338	
10,700.00	10,651.49	15,471.00	10,852.70	37.88	89.73	74.60	137.43	995.93	751.39	630.24	121.14	6.202	
10,725.00	10,671.12	15,471.00	10,852.70	37.94	89.73	75.80	137.43	995.93	741.96	619.89	122.08	6.078	
10,750.00	10,689.91	15,471.00	10,852.70	37.98	89.73	77.09	137.43	995.93	733.27	610.34	122.93	5.965	
10,768.77	10,703.44	15,471.00	10,852.70	38.02	89.73	78.12	137.43	995.93	727.25	603.74	123.51	5.888	
10,800.00	10,725.52	15,471.00	10,852.70	38.07	89.73	79.88	137.43	995.93	718.23	593.85	124.38	5.775	
10,868.77	10,774.15	15,471.00	10,852.70	38.18	89.73	83.83	137.43	995.93	702.86	576.98	125.88	5.583	
10,875.00	10,778.53	15,471.00	10,852.70	38.19	89.73	84.20	137.43	995.93	701.79	575.80	125.99	5.570	
10,900.00	10,795.50	15,471.00	10,852.70	38.24	89.73	85.71	137.43	995.93	698.05	571.72	126.33	5.526	
10,925.00	10,811.48	15,471.00	10,852.70	38.27	89.73	87.29	137.43	995.93	695.24	568.70	126.54	5.494	
10,950.00	10,826.44	15,470.45	10,852.69	38.31	89.72	88.91	137.98	995.92	693.38	566.75	126.62	5.476	
10,975.00	10,840.33	15,449.99	10,852.23	38.34	89.42	88.93	158.43	995.56	692.16	565.56	126.60	5.467	
11,000.00	10,853.11	15,428.80	10,851.75	38.37	89.10	88.96	179.61	995.19	691.27	564.74	126.52	5.464	SF
11,025.00	10,864.75	15,412.46	10,851.42	38.41	88.86	89.44	195.94	994.95	690.70	564.31	126.39	5.465	ES
11,046.02	10,873.63	15,399.61	10,851.28	38.46	88.67	89.95	208.80	994.88	690.55	564.32	126.23	5.470	CC
11,050.00	10,875.22	15,397.13	10,851.26	38.47	88.64	90.05	211.27	994.88	690.56	564.36	126.20	5.472	
11,075.00	10,884.48	15,380.59	10,851.25	38.54	88.39	90.60	227.81	994.99	690.81	564.83	125.97	5.484	
11,100.00	10,892.52	15,357.52	10,851.31	38.61	88.06	90.65	250.88	995.24	691.27	565.54	125.73	5.498	
11,125.00	10,899.30	15,334.10	10,851.33	38.69	87.71	90.70	274.30	995.52	691.80	566.33	125.47	5.514	
11,150.00	10,904.82	15,310.38	10,851.30	38.76	87.37	90.76	298.02	995.82	692.37	567.18	125.19	5.531	
11,175.00	10,909.05	15,286.22	10,851.24	38.83	87.02	90.80	322.18	996.15	692.95	568.05	124.90	5.548	
11,200.00	10,911.99	15,260.10	10,851.14	38.91	86.64	90.69	348.30	996.48	693.47	568.86	124.61	5.565	
11,225.00	10,913.63	15,233.84	10,851.02	38.98	86.25	90.58	374.55	996.77	693.88	569.56	124.32	5.582	
11,243.77	10,914.00	15,214.09	10,850.93	39.04	85.97	90.50	394.30	996.95	694.11	570.02	124.09	5.593	
11,300.00	10,914.00	15,153.73	10,850.36	39.22	85.09	90.16	454.66	997.28	694.56	571.11	123.44	5.627	
11,400.00	10,914.00	15,049.70	10,847.14	39.58	83.58	89.83	558.63	996.93	694.58	572.25	122.33	5.678	
11,448.76	10,914.00	15,001.64	10,845.33	39.79	82.88	89.89	606.66	996.68	694.54	572.72	121.82	5.701	
11,500.00	10,914.00	14,956.59	10,843.69	40.01	82.23	90.41	651.68	996.69	694.77	573.48	121.28	5.728	
11,600.00	10,914.00	14,866.53	10,840.95	40.50	80.94	91.23	741.69	997.86	696.46	576.16	120.30	5.789	
11,700.00	10,914.00	14,769.94	10,839.56	41.04	79.58	91.51	838.23	1,000.23	699.19	579.79	119.41	5.856	
11,800.00	10,914.00	14,672.63	10,840.34	41.65	78.21	91.72	935.51	1,002.89	702.06	583.47	118.58	5.920	
11,900.00	10,914.00	14,573.79	10,840.98	42.31	76.84	91.82	1,034.29	1,006.16	705.50	587.67	117.83	5.987	
12,000.00	10,914.00	14,476.51	10,840.85	43.02	75.49	92.03	1,131.52	1,009.25	708.87	591.73	117.14	6.052	

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 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

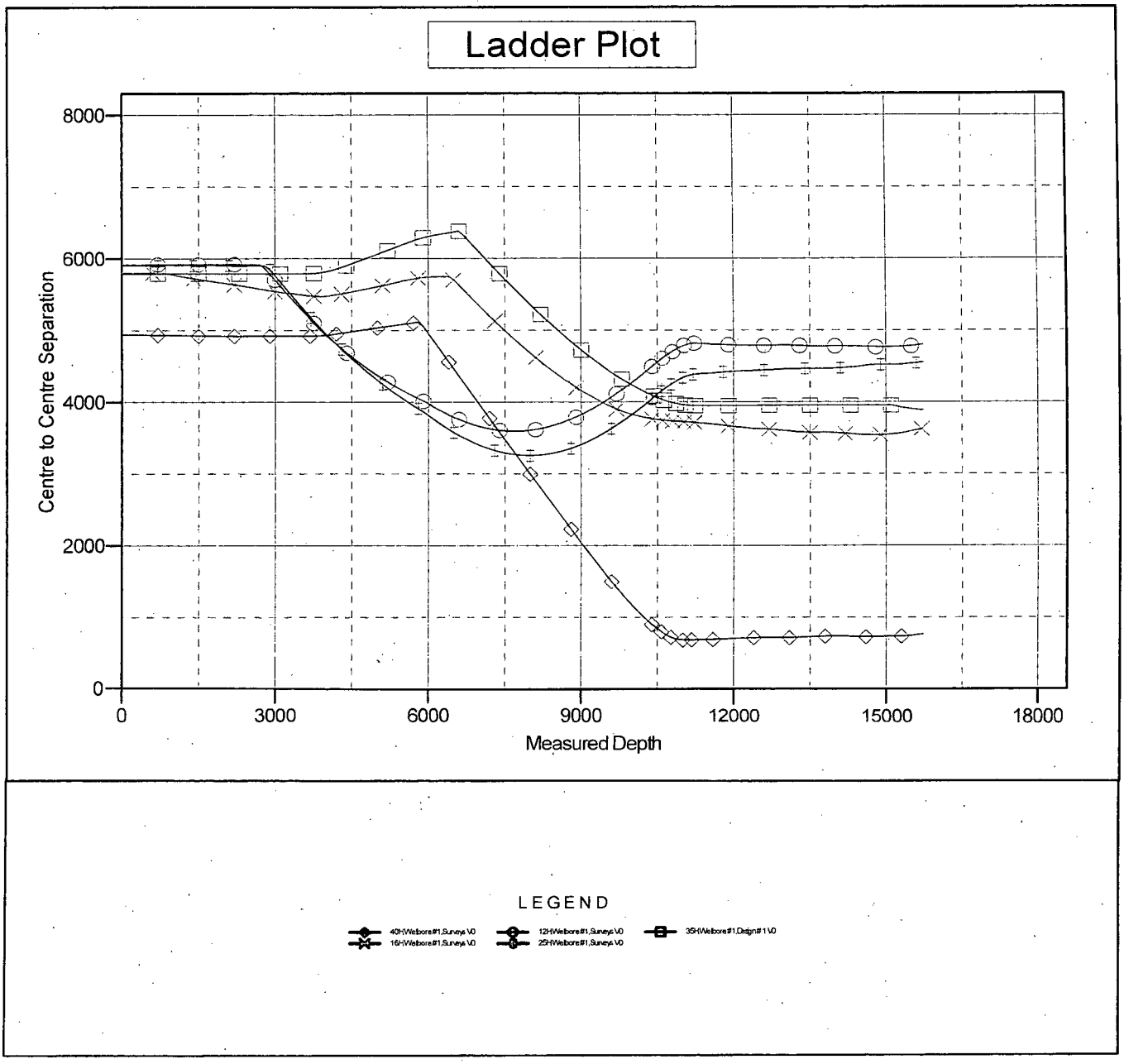
Offset Design RDX Federal COM 17 - 40H - Wellbore #1 - Surveys — Offset Site Error: 0.00 usft

Survey Program: 158-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
12,100.00	10,914.00	14,376.75	10,839.84	43.78	74.13	92.05	1,231.21	1,012.90	712.78	596.28	116.51	6.118	
12,200.00	10,914.00	14,276.82	10,839.70	44.60	72.77	92.05	1,331.07	1,016.38	716.45	600.51	115.94	6.179	
12,300.00	10,914.00	14,172.09	10,842.04	45.45	71.36	91.66	1,435.71	1,020.02	719.96	604.53	115.43	6.237	
12,400.00	10,914.00	14,061.85	10,843.27	46.35	69.88	90.85	1,545.92	1,022.52	722.34	607.36	114.98	6.283	
12,500.00	10,914.00	13,954.05	10,842.78	47.29	68.45	90.23	1,653.71	1,023.46	723.43	608.87	114.56	6.315	
12,600.00	10,914.00	13,850.14	10,841.92	48.27	67.07	89.92	1,757.61	1,023.56	723.76	609.58	114.19	6.339	
12,700.00	10,914.00	13,746.85	10,840.95	49.28	65.72	89.66	1,860.89	1,023.02	723.49	609.63	113.86	6.354	
12,800.00	10,914.00	13,646.31	10,838.87	50.33	64.42	89.62	1,961.40	1,022.29	723.10	609.51	113.59	6.366	
12,900.00	10,914.00	13,544.86	10,835.93	51.41	63.11	89.50	2,062.82	1,021.26	722.49	609.14	113.36	6.374	
13,000.00	10,914.00	13,443.02	10,831.82	52.52	61.82	89.36	2,164.56	1,019.98	721.75	608.58	113.16	6.378	
13,090.85	10,914.00	13,358.74	10,829.40	53.56	60.77	89.89	2,248.79	1,018.98	721.07	608.02	113.06	6.378	
13,100.00	10,914.00	13,350.96	10,829.36	53.66	60.68	90.00	2,256.57	1,018.97	721.08	608.03	113.05	6.379	
13,200.00	10,914.00	13,262.16	10,831.05	54.82	59.60	90.89	2,345.35	1,019.93	722.18	609.19	112.99	6.391	
13,300.00	10,914.00	13,164.74	10,834.65	56.01	58.44	91.10	2,442.68	1,022.09	724.29	611.32	112.97	6.411	
13,400.00	10,914.00	13,073.43	10,837.19	57.22	57.37	91.79	2,533.92	1,024.24	726.65	613.65	112.99	6.431	
13,500.00	10,914.00	12,982.22	10,840.83	58.46	56.34	92.48	2,624.97	1,028.26	730.92	617.87	113.06	6.465	
13,600.00	10,914.00	12,877.30	10,843.12	59.71	55.17	92.09	2,729.77	1,032.62	735.12	621.95	113.17	6.496	
13,700.00	10,914.00	12,748.73	10,842.00	60.98	53.77	89.87	2,858.29	1,035.36	737.62	624.35	113.27	6.512	
13,718.37	10,914.00	12,730.61	10,841.61	61.22	53.58	89.89	2,876.41	1,035.26	737.59	624.28	113.31	6.510	
13,800.00	10,914.00	12,665.21	10,840.80	62.27	52.88	91.15	2,941.80	1,035.80	738.48	624.97	113.51	6.506	
13,900.00	10,914.00	12,552.59	10,841.26	63.58	51.72	90.17	3,054.40	1,037.63	740.32	626.60	113.72	6.510	
14,000.00	10,914.00	12,455.45	10,841.84	64.91	50.74	90.39	3,151.54	1,038.14	740.99	626.97	114.02	6.499	
14,100.00	10,914.00	12,349.94	10,841.75	66.24	49.72	89.96	3,257.04	1,038.64	741.67	627.33	114.34	6.486	
14,200.00	10,914.00	12,227.27	10,844.55	67.60	48.57	88.21	3,379.64	1,036.31	739.72	625.10	114.62	6.454	
14,300.00	10,914.00	12,132.83	10,846.85	68.96	47.71	88.64	3,474.02	1,033.58	736.89	621.81	115.08	6.403	
14,400.00	10,914.00	12,039.27	10,848.60	70.34	46.90	89.14	3,567.56	1,032.20	735.48	619.88	115.60	6.362	
14,500.00	10,914.00	11,932.50	10,849.41	71.73	46.03	88.61	3,674.30	1,030.16	733.72	617.61	116.11	6.319	
14,600.00	10,914.00	11,834.75	10,849.11	73.13	45.27	88.79	3,772.02	1,027.69	731.40	614.68	116.72	6.266	
14,700.00	10,914.00	11,747.65	10,847.90	74.54	44.64	89.80	3,859.10	1,026.41	730.23	612.78	117.45	6.217	
14,706.99	10,914.00	11,741.79	10,847.79	74.64	44.60	89.89	3,864.95	1,026.38	730.22	612.72	117.50	6.214	
14,800.00	10,914.00	11,657.49	10,846.04	75.96	44.04	90.58	3,949.24	1,026.82	730.98	612.77	118.21	6.184	
14,900.00	10,914.00	11,560.15	10,843.75	77.39	43.44	90.79	4,046.55	1,027.85	732.36	613.35	119.00	6.154	
15,000.00	10,914.00	11,465.06	10,842.23	78.83	42.91	91.17	4,141.61	1,029.30	734.17	614.31	119.87	6.125	
15,100.00	10,914.00	11,357.00	10,843.96	80.28	42.36	90.54	4,249.63	1,031.52	736.35	615.59	120.76	6.097	
15,200.00	10,914.00	11,260.15	10,844.87	81.73	41.94	90.79	4,346.46	1,032.46	737.46	615.70	121.76	6.056	
15,300.00	10,914.00	11,170.81	10,837.67	83.19	41.59	91.64	4,435.40	1,034.14	740.04	617.23	122.81	6.026	
15,400.00	10,914.00	11,052.40	10,803.98	84.66	41.17	90.62	4,548.60	1,032.24	741.22	617.62	123.60	5.997	
15,500.00	10,914.00	10,993.89	10,778.47	86.14	40.99	94.31	4,601.19	1,030.98	745.57	621.10	124.47	5.990	
15,600.00	10,914.00	10,853.06	10,696.21	87.62	40.54	93.29	4,714.79	1,023.68	754.50	630.66	123.84	6.093	
15,700.00	10,914.00	10,784.22	10,648.62	89.11	40.29	97.38	4,763.51	1,013.77	763.44	640.07	123.37	6.188	
15,732.03	10,914.00	10,762.96	10,633.65	89.59	40.22	98.77	4,778.29	1,010.68	767.75	644.64	123.11	6.236	

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 41H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Reference Site:	RDX Federal COM 17	**MD Reference:**	WELL @ 3135.00usft (Orion Phoenix)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	41H	**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 #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 3135.00usft (Orion Phoenix) Coordinates are relative to: 41H
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W Grid Convergence at Surface is: 0.23°



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Coordinate System is US State Plane 1983, New Mexico Eastern Zone
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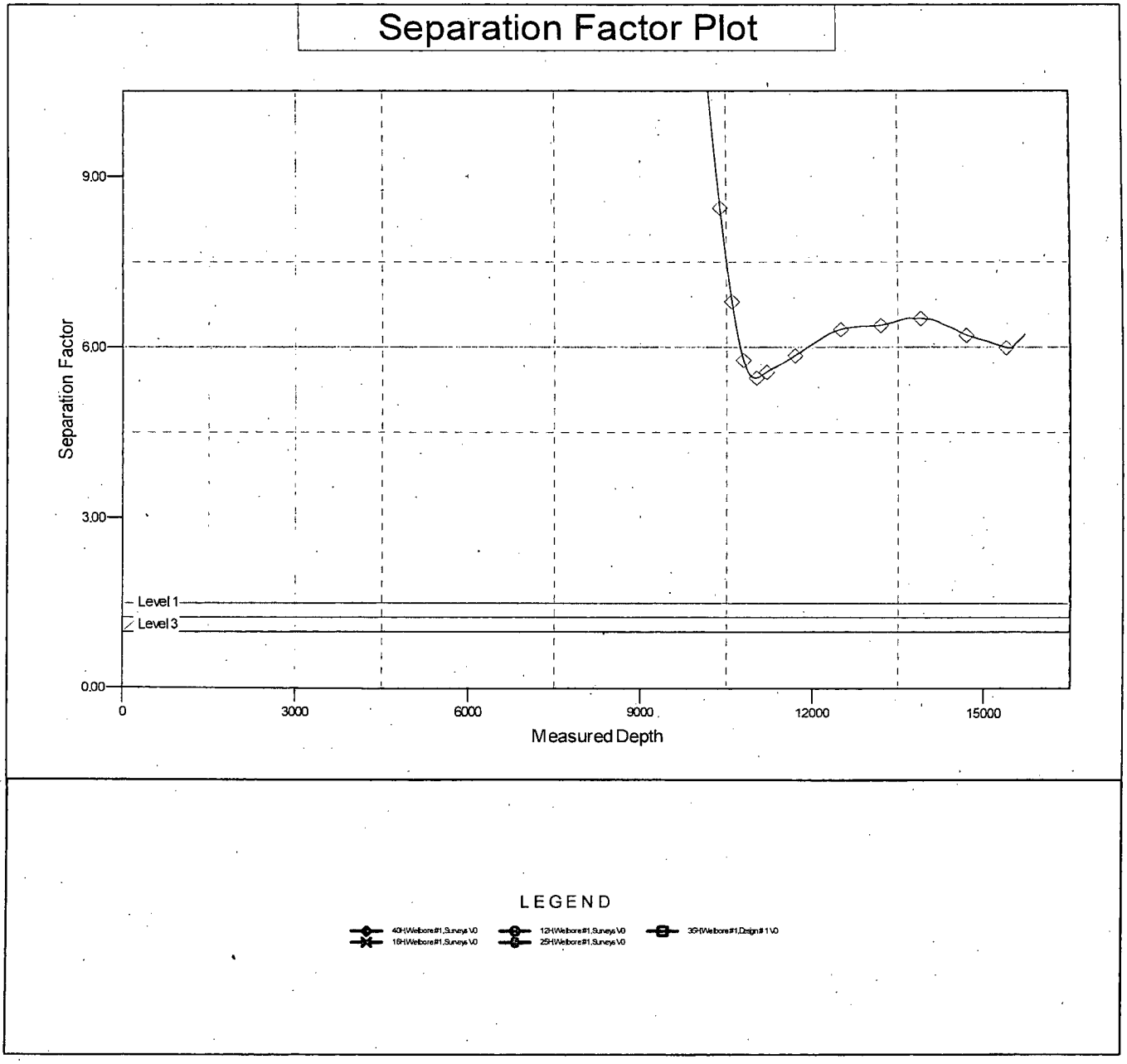
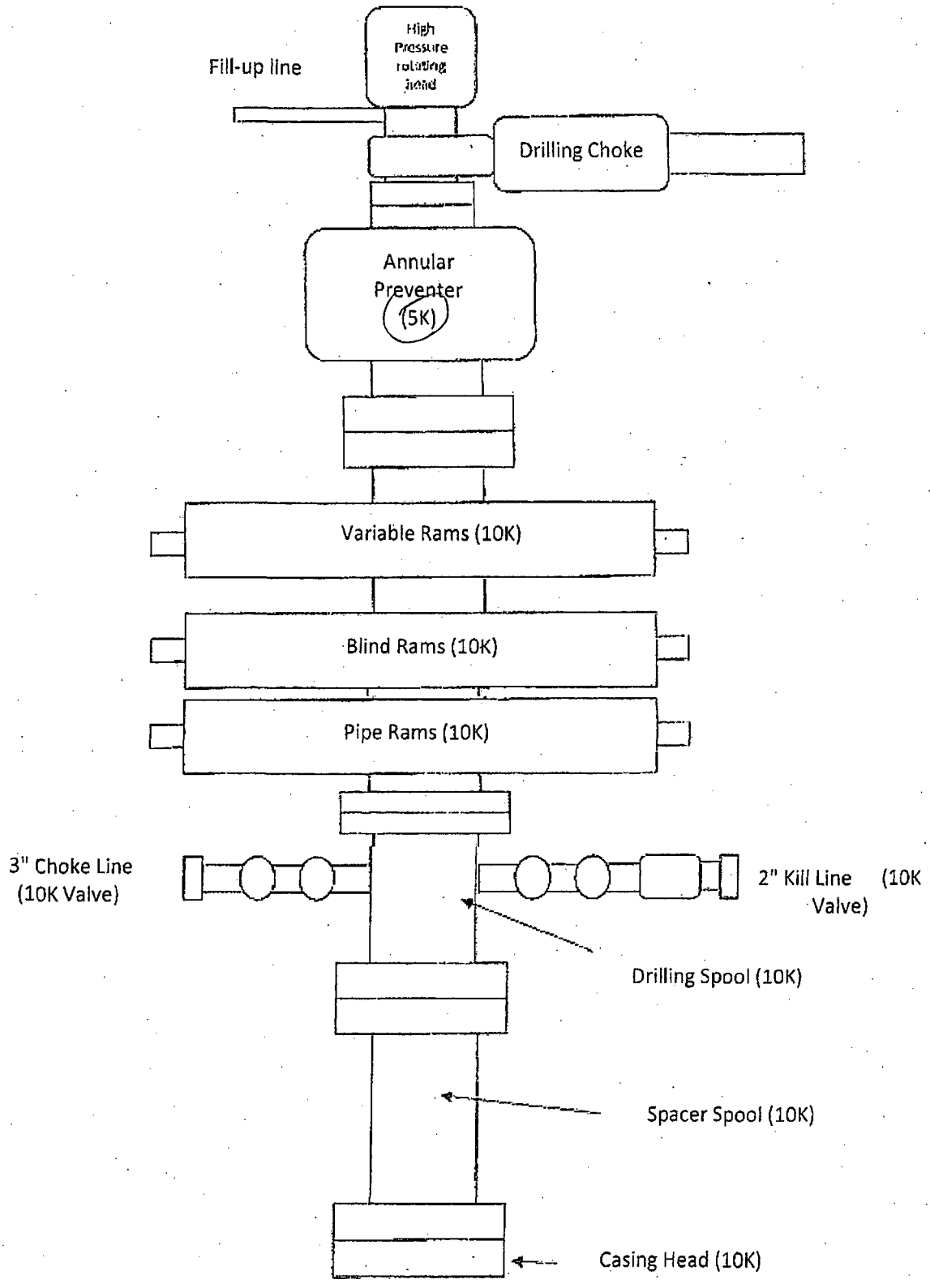
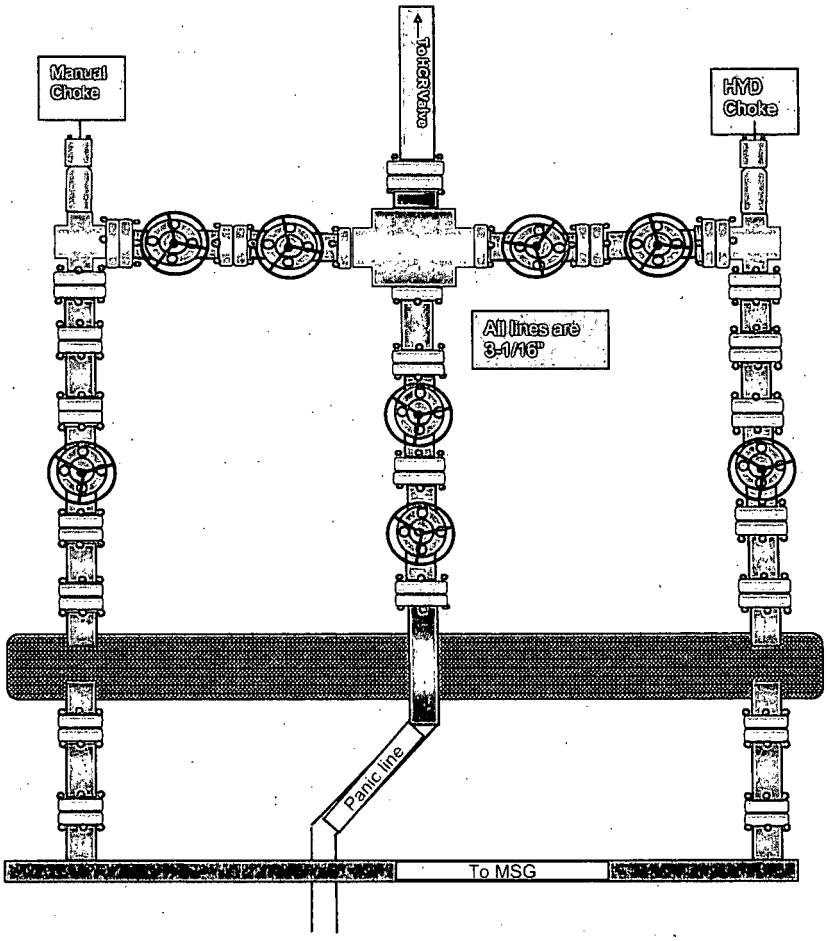


13" 10K psi BOP



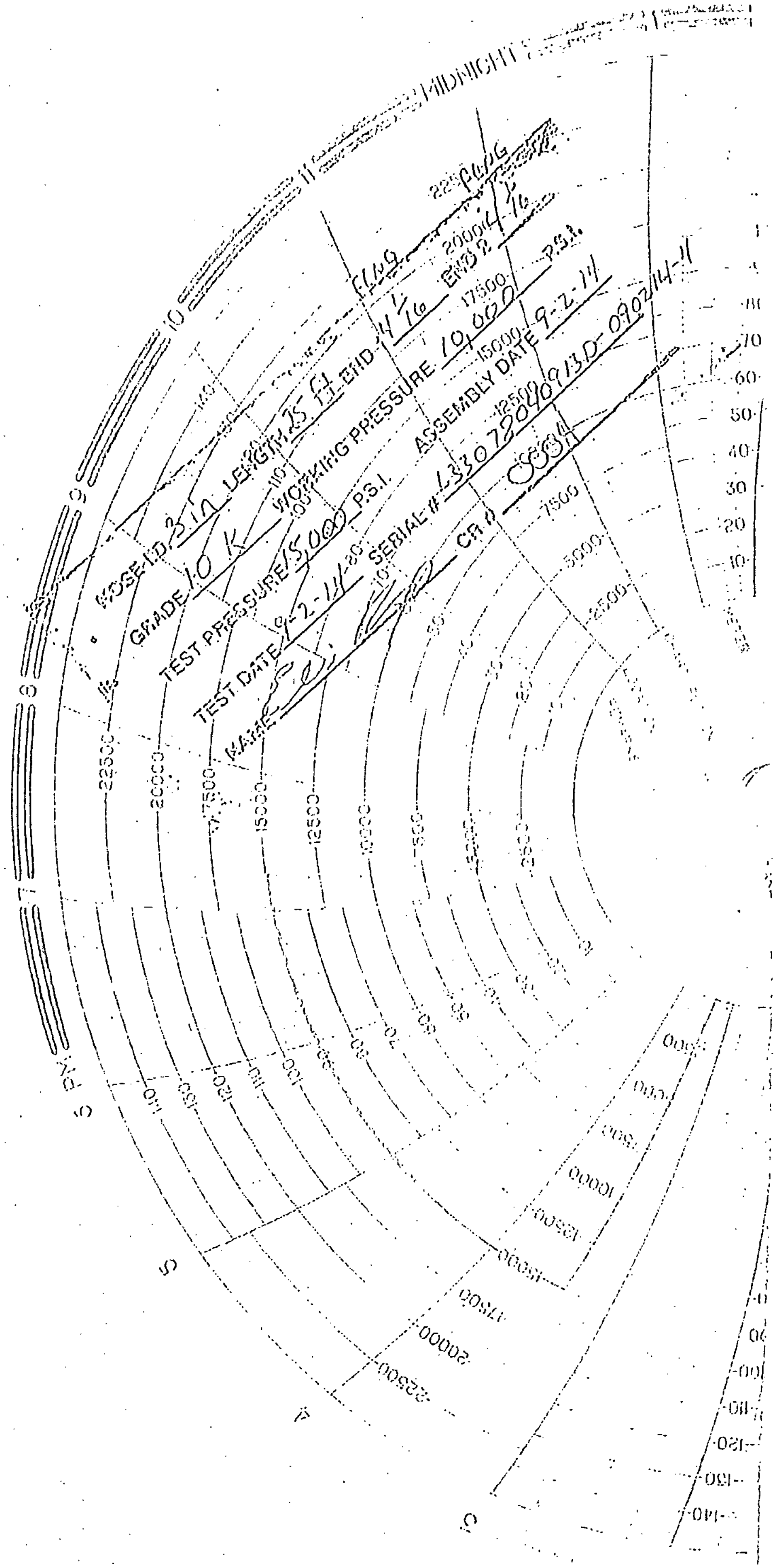
5M Choke Manifold



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 35 ft END 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 # L33078040913D-090214-1
NAME CR # 0004

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 :	L33078040913D-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
LEASE NO.:	NM20965
WELL NAME & NO.:	41H-RDX FEDERAL COM 17
SURFACE HOLE FOOTAGE:	200' FSL & 1400' FEL
BOTTOM HOLE FOOTAGE	230' FNL & 1095' FEL
LOCATION:	Section 17, T. 26 S., R 30 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. 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.).

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.

Medium cave/karst potential
Possibility of water flows in the Salado and Delaware.
Possibility of lost circulation in the Rustler and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **1035** 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.

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. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, 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 200 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. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. **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.**
    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.**

4. 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.
CRW 092716