

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 1/16/2018

Well information;

Operator WAX, Well Name and Number S. Escavala Unit 351H

API# 30-643-21317, Section 27, Township 22 N/S, Range 7 E/W

Conditions of Approval: (See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
- ☒ Hold C-104 for NSL, NSP, DHC
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☐ Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Charlie Hern
NMOCD Approved by Signature

7-20-2018
Date

APD held for
Unit approval
- all agencies

SURFACE BIA

NOS: 10/26/17
APDP: _____
MP: _____
SMA: BIA
BOND: UTB000178
CA/PA: _____

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NOG13121825
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator WPX ENERGY LLC		7. If Unit or CA Agreement, Name and No.
3a. Address 720 S Main Aztec NM 87410	3b. Phone No. (include area code) (505)333-1822	8. Lease Name and Well No. S ESCAVADA UNIT 351H
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface: NESE / 2087 FSL / 417 FEL / LAT 36.108428 / LONG -107.555611 At proposed prod. zone: NWSW / 1873 FSL / 330 FWL / LAT 36.122948 / LONG -107.570244		9. API Well No. 30-043-21317
14. Distance in miles and direction from nearest town or post office* 53.9 miles		10. Field and Pool, or Exploratory MANCOS / RUSTY GALLUP OIL POOL
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 417 feet		11. Sec., T. R. M. or Blk. and Survey or Area SEC 27 / T22N / R7W / NMP
16. No. of acres in lease 160		12. County or Parish SANDOVAL
17. Spacing Unit dedicated to this well 280		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, 20 feet applied for, on this lease, ft. 4680 feet / 11511 feet		19. Proposed Depth 4680 feet / 11511 feet
20. BLM BIA Bond No. on file FED: UTB000178		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6749 feet
22. Approximate date work will start* 04/01/2018		23. Estimated duration 30 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature (Electronic Submission)	Name (Printed Typed) Lacey Granillo / Ph: (505)333-1816	Date 01/16/2018
Title Permitting Tech III		
Approved by (Signature) <i>[Signature]</i>	Name (Printed Typed)	Date 5/15/18
Title AFM	Office FARMINGTON	

Application approval 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.
Conditions of approval, if any, are attached.

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.

(Continued on page 2)

*(Instructions on page 2)
ACCEPTED FOR RECORD

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

JAN 17 2018

FARMINGTON FIELD OFFICE
BY: *[Signature]*

NMOCDA

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30.043-21317		*Pool Code 52860	*Pool Name RUSTY GALLUP OIL POOL
*Property Code 322151	*Property Name S ESCAVADA UNIT		*Well Number 351H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC (Enduring)		*Elevation 6749'

10 Surface Location

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	27	22N	7W		2087	SOUTH	417	EAST	SANDOVAL

11 Bottom Hole Location If Different From Surface

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	22	22N	7W		1873	SOUTH	330	WEST	SANDOVAL

*Dedicated Acres 280.00 NE/4 NW/4, W/2 NE/4 SE/4 NE/4 - Section 27 W/2 SW/4, SE/4 SW/4 - Section 22	*Joint or Infill	*Consolidation Code	*Order No. R-14347
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NO ALLOWABLE WILL BE ASSIGNED
TO THIS COMPLETION UNTIL ALL
INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS
BEEN APPROVED BY THE DIVISION

17 OPERATOR CERTIFICATION

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

Signature _____ Date 1/15/18
Lacey Granillo
Printed Name
lacey.granillo@wpxenergy.com
E-mail Address

18 SURVEYOR CERTIFICATION

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

Date Revised: JANUARY 8, 2018
Date of Survey: MAY 1, 2017

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

END-OF-LATERAL
1873' FSL 330' FEL
SEC 22, T22N, R7W
LAT: 36.122933° N
LONG: 107.569637° W
DATUM: NAD1927

LAT: 36.122948° N
LONG: 107.570244° W
DATUM: NAD1983

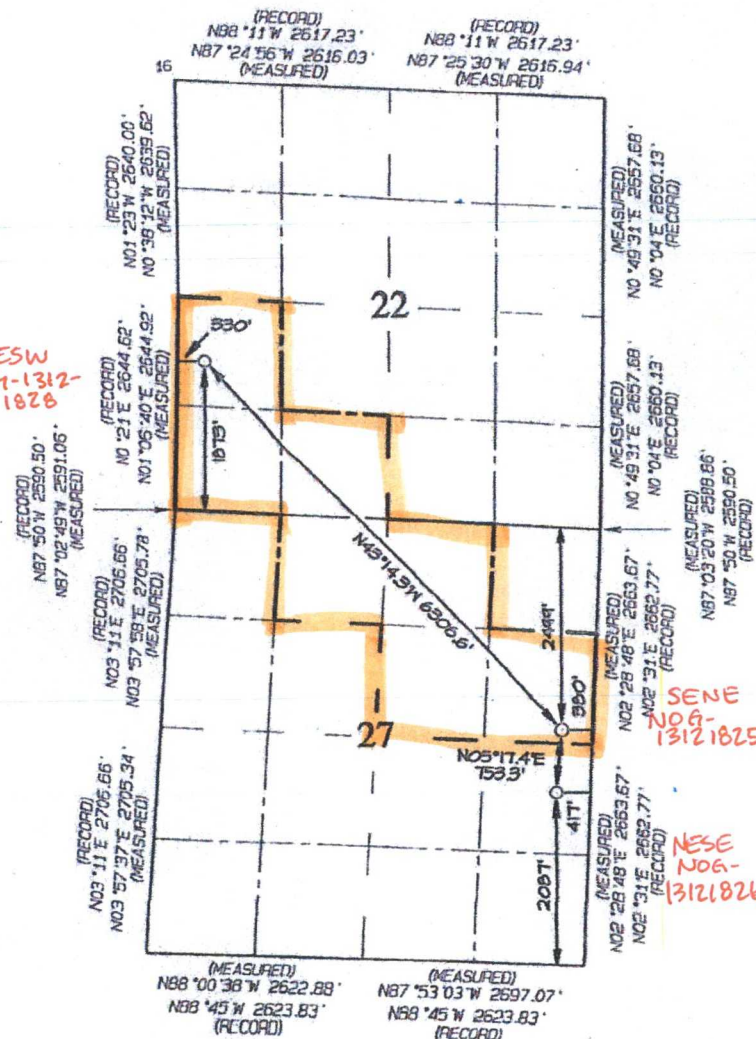
NEWW
NOOC-14206365

POINT-OF-ENTRY
2499' FSL 380' FEL
SEC 27, T22N, R7W
LAT: 36.110475° N
LONG: 107.554804° W
DATUM: NAD1927

LAT: 36.110490° N
LONG: 107.555410° W
DATUM: NAD1983

SURFACE LOCATION
2087' FSL 417' FEL
SEC 27, T22N, R7W
LAT: 36.108412° N
LONG: 107.555004° W
DATUM: NAD1927

LAT: 36.108428° N
LONG: 107.555611° W
DATUM: NAD1983



Navajo Surface



WPX Energy

Operations Plan

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

Date: January 15, 2018
Well Name: S. Escavada Unit #351H
SH Location: NESE Sec 27 22N-07W
BH Location: NWSW Sec 22 22N-07W

Field: Rusty Gallup Oil Pool
Surface: IA
Elevation: 6,749'
Minerals: IA

Measured Depth: 11,511'

I. GEOLOGY

Surface formation - NACIMIENTO

A. FORMATION TOPS: (KB)

NAME	MD	TVD	NAME	MD	TVD
Ojo Alamo	451	451	Mancos	3615	3577
Kirtland	663	663	Gallup	3933	3890
Picture Cliffs	1126	1121			
Lewis	1164	1158	KICKOFF POINT	4005	3962
Chacra	1442	1432	LANDING POINT	5055	4645
Cliff House	2554	2530	TOP TARGET	5055	4645
Menefee	2577	2552			
Point Lookout	3384	3349	TD	11511	4680

B. MUD LOGGING PROGRAM:

Mudlogger on location from surface csg to TD.

C. LOGGING PROGRAM:

LWD GR from surface casing to TD.

D. NATURAL GAUGES:

Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM:

LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 3/4" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. BOP TESTING:

While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The BOPE will be tested to 2,000 psi (High) for 10 minutes and the annular tested to 1,500 psi for 10 minutes. Pressure test surface casing to 1,500 psi for 30 minutes and intermediate casing to 1,500 psi for 30 minutes. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. All tests and inspections will be recorded in the tour book as to time and results.

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	12.25"	320'	9.625"	36 LBS	J-55 or equiv	STC
INTERMEDIATE	8.75"	5055'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	4905' - 11511'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 4905'	4.5"	11.6 LBS	P-110 or equiv	LTC

B. FLOAT EQUIPMENT:

1. SURFACE CASING:

9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.

2. INTERMEDIATE CASING:

7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. If losses are encountered during the drilling of the intermediate section a DV tool will be utilized and a 2 stage cement job may be planned to ensure cement circ back to surface. The DV tool will be placed 100' above the top of the Chacra formation. If cement is circulated back to surface on the first stage, a cancellation device will be dropped to shift the dv tool closed and the 2nd stage cement job will be aborted at that time, if no cement is seen at surface on the 1st stage the stage tool will be opened and a 2nd stage cement job will be pumped.

3. PRODUCTION LINER:

Run 4-1/2" Liner with cement nose guide Float Shoe + 2jts. of 4-1/2" casing + Landing Collar + 4-1/2" pup joint + 1 RSI (Sliding Sleeve) positioned inside the 330ft Hard line. Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Test TOL to 1500 psi for 15 minutes.

C. CEMENT:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. Surface:

5 bbl Fresh Water Spacer, 28.0 bbls, 100 sx (160 cu.ft.) of 14.5 ppg Type I-II (Neat G) + 20% Fly Ash cement w/ 7.41 gal/sack mix water ratio @ 1.61 cu ft/sx yield. Calculated @ volume + 50% excess. WOC 12 hours. Test csg to 600psi. Total Volume: (160 cu-ft/100 sx/ 28.0 Bbls). TOC at Surface.

2. Intermediate:

Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 110 bbls, 318 sks, (620 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 104 bbls, 451 sks, (587 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 199 bbl Drilling mud or water. Total Cement: 215 bbls, 769 sks, (1207 cuft)

3. Prod Liner:

Spacer #1: 10 bbl (56 cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Toned Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem™ System. Yield 1.36 cuft/sk 13.3 ppg (615 sk / 836 cuft / 149 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 135 bbl Fr Water. Total Cement: 149 bbls, 615 sks, (836 cuft)

D. COMPLETION:

Run CCL for perforating

A. PRESSURE TEST:

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

B. STIMULATION:

1. Stimulate with approximately 1,000#/ft 20/40 mesh sand and +/- 200' stage interval for full lateral length of the well with water and N2. Isolate stages with flow through frac plug.

3. Drill out frac plugs and flowback lateral.

C. RUNNING TUBING:

1. Production Tubing: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner.

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

NOTES:

A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# J-55 Intermediate casing with a Liner Hanger and pack-off assembly then cemented to top of liner hanger.

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

WPX Energy

Sandoval County, NM 3003 West

S Escavada UT 350 Pad

S Escavada UT 351H

API: ???

Wellbore #1

Plan: Plan #1

Standard Planning Report

04 January, 2018

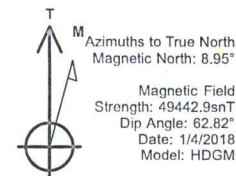


Scientific Drilling

www.scientificdrilling.com



S Escavada UT 351H
Sandoval County, NM 3003 West
Northing: 1858820.22
Easting: 582215.54
Plan #1



WELL DETAILS S Escavada UT 351H

Ground Level: 6749.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1858820.22	582215.54	36.108412	-107.555004

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	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	
866.46	9.33	76.99	866.40	8.53	36.92	2.00	76.99	-19.52	
4005.48	9.33	76.99	3961.90	123.05	532.72	0.00	0.00	-281.63	
5055.28	89.69	315.99	4645.00	643.33	163.14	9.00	-120.71	349.35	
11510.50	89.69	315.99	4680.00	5286.09	-4321.67	0.00	0.00	6804.48	SEU351H BHL

SITE DETAILS: S Escavada UT 350 Pad

Site Centre Northing: 1858824.89
 Easting: 582196.03

Positional Uncertainty: 0.00
 Convergence: 0.16
 Local North: True

PROJECT DETAILS: Sandoval County, NM 3003 West

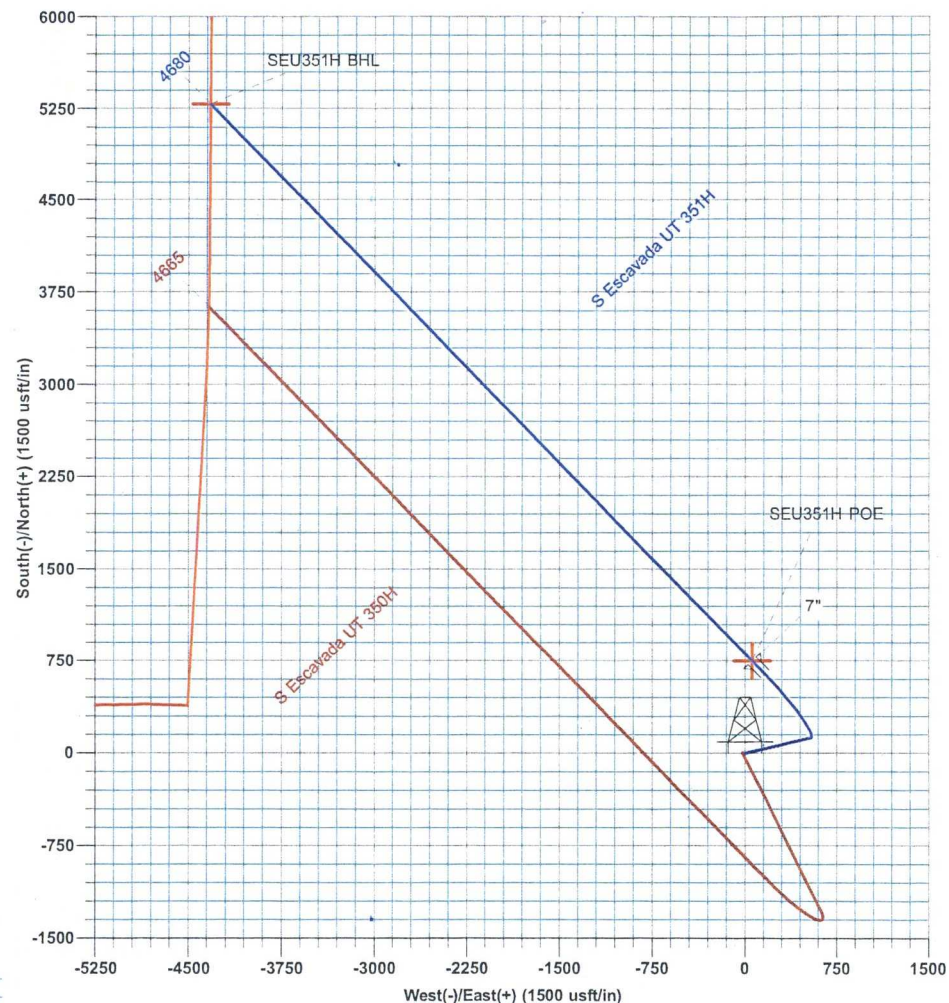
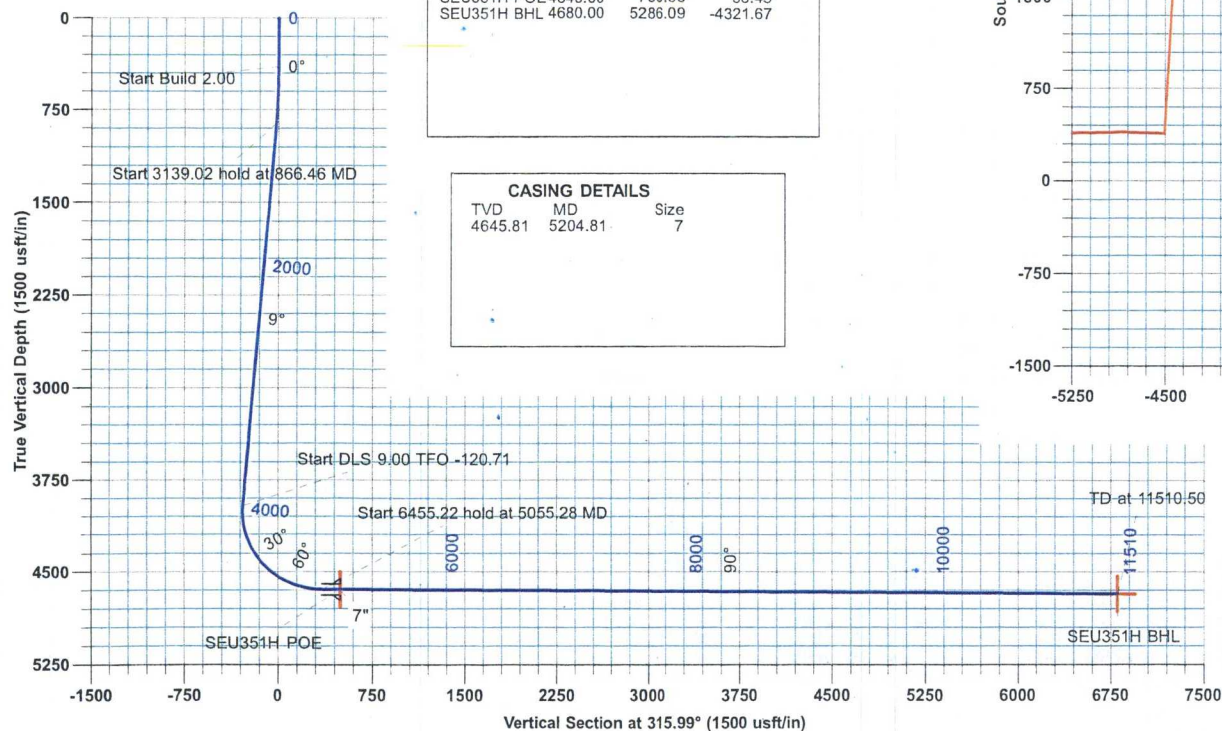
Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico West 3003
 System Datum: Mean Sea Level

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W
SEU351H POE	4645.00	750.58	58.49
SEU351H BHL	4680.00	5286.09	-4321.67

CASING DETAILS

TVD	MD	Size
4645.81	5204.81	7



Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well S Escavada UT 351H
Company:	WPX Energy	TVD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Site:	S Escavada UT 350 Pad	North Reference:	True
Well:	S Escavada UT 351H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	Sandoval County, NM 3003 West		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	S Escavada UT 350 Pad			
Site Position:		Northing:	1,858,824.89 usft	Latitude: 36.108425
From:	Lat/Long	Easting:	582,196.03 usft	Longitude: -107.555070
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.16 °

Well	S Escavada UT 351H			
Well Position	+N/-S	-4.73 usft	Northing:	1,858,820.22 usft
	+E/-W	19.50 usft	Easting:	582,215.54 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft
			Ground Level:	6,749.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/4/2018	8.95	62.82	49,443

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	315.99

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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
866.46	9.33	76.99	864.40	8.53	36.92	2.00	2.00	0.00	76.99	
4,005.48	9.33	76.99	3,961.90	123.05	532.72	0.00	0.00	0.00	0.00	
5,055.28	89.69	315.99	4,645.00	643.33	163.14	9.00	7.65	-11.53	-120.71	
11,510.50	89.69	315.99	4,680.00	5,286.09	-4,321.67	0.00	0.00	0.00	0.00	SEU351H BHL

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well S Escavada UT 351H
Company:	WPX Energy	TVD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Site:	S Escavada UT 350 Pad	North Reference:	True
Well:	S Escavada UT 351H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
451.00	1.02	76.99	451.00	0.10	0.44	-0.23	2.00	2.00	0.00
Ojo Alamo									
500.00	2.00	76.99	499.98	0.39	1.70	-0.90	2.00	2.00	0.00
600.00	4.00	76.99	599.84	1.57	6.80	-3.59	2.00	2.00	0.00
663.37	5.27	76.99	663.00	2.72	11.79	-6.23	2.00	2.00	0.00
Kirtland									
700.00	6.00	76.99	699.45	3.53	15.29	-8.08	2.00	2.00	0.00
800.00	8.00	76.99	798.70	6.27	27.16	-14.36	2.00	2.00	0.00
866.46	9.33	76.99	864.40	8.53	36.92	-19.52	2.00	2.00	0.00
900.00	9.33	76.99	897.50	9.75	42.22	-22.32	0.00	0.00	0.00
1,000.00	9.33	76.99	996.18	13.40	58.01	-30.67	0.00	0.00	0.00
1,100.00	9.33	76.99	1,094.85	17.05	73.81	-39.02	0.00	0.00	0.00
1,126.50	9.33	76.99	1,121.00	18.01	77.99	-41.23	0.00	0.00	0.00
Picture Cliffs									
1,163.99	9.33	76.99	1,158.00	19.38	83.91	-44.36	0.00	0.00	0.00
Lewis									
1,200.00	9.33	76.99	1,193.53	20.70	89.60	-47.37	0.00	0.00	0.00
1,300.00	9.33	76.99	1,292.21	24.34	105.40	-55.72	0.00	0.00	0.00
1,400.00	9.33	76.99	1,390.88	27.99	121.19	-64.07	0.00	0.00	0.00
1,441.67	9.33	76.99	1,432.00	29.51	127.77	-67.55	0.00	0.00	0.00
Chacra									
1,500.00	9.33	76.99	1,489.56	31.64	136.99	-72.42	0.00	0.00	0.00
1,600.00	9.33	76.99	1,588.24	35.29	152.78	-80.77	0.00	0.00	0.00
1,700.00	9.33	76.99	1,686.92	38.94	168.58	-89.12	0.00	0.00	0.00
1,800.00	9.33	76.99	1,785.59	42.58	184.37	-97.47	0.00	0.00	0.00
1,900.00	9.33	76.99	1,884.27	46.23	200.16	-105.82	0.00	0.00	0.00
2,000.00	9.33	76.99	1,982.95	49.88	215.96	-114.17	0.00	0.00	0.00
2,100.00	9.33	76.99	2,081.63	53.53	231.75	-122.52	0.00	0.00	0.00
2,200.00	9.33	76.99	2,180.30	57.18	247.55	-130.87	0.00	0.00	0.00
2,300.00	9.33	76.99	2,278.98	60.83	263.34	-139.22	0.00	0.00	0.00
2,400.00	9.33	76.99	2,377.66	64.47	279.14	-147.57	0.00	0.00	0.00
2,500.00	9.33	76.99	2,476.34	68.12	294.93	-155.92	0.00	0.00	0.00
2,554.38	9.33	76.99	2,530.00	70.11	303.52	-160.46	0.00	0.00	0.00
Cliff House									
2,576.68	9.33	76.99	2,552.00	70.92	307.04	-162.32	0.00	0.00	0.00
Menefee									
2,600.00	9.33	76.99	2,575.01	71.77	310.73	-164.27	0.00	0.00	0.00
2,700.00	9.33	76.99	2,673.69	75.42	326.52	-172.62	0.00	0.00	0.00
2,800.00	9.33	76.99	2,772.37	79.07	342.32	-180.97	0.00	0.00	0.00
2,900.00	9.33	76.99	2,871.04	82.72	358.11	-189.32	0.00	0.00	0.00
3,000.00	9.33	76.99	2,969.72	86.36	373.91	-197.67	0.00	0.00	0.00
3,100.00	9.33	76.99	3,068.40	90.01	389.70	-206.02	0.00	0.00	0.00
3,200.00	9.33	76.99	3,167.08	93.66	405.50	-214.37	0.00	0.00	0.00
3,300.00	9.33	76.99	3,265.75	97.31	421.29	-222.72	0.00	0.00	0.00
3,384.36	9.33	76.99	3,349.00	100.39	434.62	-229.76	0.00	0.00	0.00
Point Lookout									

Scientific Drilling Int.
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well S Escavada UT 351H
Company:	WPX Energy	TVD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Site:	S Escavada UT 350 Pad	North Reference:	True
Well:	S Escavada UT 351H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,400.00	9.33	76.99	3,364.43	100.96	437.09	-231.07	0.00	0.00	0.00	
3,500.00	9.33	76.99	3,463.11	104.60	452.88	-239.42	0.00	0.00	0.00	
3,600.00	9.33	76.99	3,561.79	108.25	468.68	-247.77	0.00	0.00	0.00	
3,615.42	9.33	76.99	3,577.00	108.82	471.11	-249.06	0.00	0.00	0.00	
Mancos										
3,700.00	9.33	76.99	3,660.46	111.90	484.47	-256.12	0.00	0.00	0.00	
3,800.00	9.33	76.99	3,759.14	115.55	500.26	-264.47	0.00	0.00	0.00	
3,900.00	9.33	76.99	3,857.82	119.20	516.06	-272.82	0.00	0.00	0.00	
3,932.61	9.33	76.99	3,890.00	120.39	521.21	-275.54	0.00	0.00	0.00	
Gallup										
4,005.48	9.33	76.99	3,961.90	123.05	532.72	-281.63	0.00	0.00	0.00	
4,050.00	8.05	51.59	4,005.93	125.80	538.68	-283.79	9.00	-2.87	-57.06	
4,100.00	8.82	20.99	4,055.41	131.55	542.80	-282.51	9.00	1.55	-61.20	
4,140.17	10.84	3.25	4,095.00	138.21	544.12	-278.64	9.00	5.02	-44.15	
Gallup Upper										
4,150.00	11.45	359.95	4,104.64	140.10	544.17	-277.32	9.00	6.23	-33.61	
4,200.00	14.99	347.66	4,153.32	151.39	542.78	-268.23	9.00	7.07	-24.59	
4,250.00	18.93	340.17	4,201.14	165.35	538.65	-255.32	9.00	7.89	-14.97	
4,300.00	23.08	335.24	4,247.81	181.88	531.79	-238.66	9.00	8.28	-9.87	
4,350.00	27.33	331.75	4,293.04	200.90	522.25	-218.36	9.00	8.50	-6.97	
4,400.00	31.64	329.15	4,336.56	222.28	510.09	-194.53	9.00	8.63	-5.21	
4,450.00	36.00	327.12	4,378.09	245.89	495.38	-167.33	9.00	8.71	-4.07	
4,498.19	40.22	325.53	4,416.00	270.62	478.88	-138.08	9.00	8.77	-3.30	
Mancos Lwr										
4,500.00	40.38	325.47	4,417.38	271.59	478.21	-136.92	9.00	8.79	-3.00	
4,519.44	42.09	324.91	4,432.00	282.10	470.90	-124.28	9.00	8.80	-2.89	
El Vado										
4,550.00	44.78	324.10	4,454.19	299.21	458.69	-103.50	9.00	8.81	-2.66	
4,600.00	49.20	322.93	4,488.29	328.59	436.95	-67.26	9.00	8.83	-2.35	
4,650.00	53.63	321.90	4,519.46	359.54	413.11	-28.43	9.00	8.86	-2.06	
4,700.00	58.06	320.98	4,547.53	391.89	387.31	12.75	9.00	8.87	-1.83	
4,704.70	58.48	320.90	4,550.00	394.99	384.80	16.73	9.00	8.88	-1.73	
Frac Barrier - Mancos Unc										
4,750.00	62.51	320.15	4,572.31	425.41	359.73	56.03	9.00	8.88	-1.66	
4,800.00	66.95	319.38	4,593.65	459.92	330.53	101.13	9.00	8.89	-1.54	
4,822.24	68.93	319.06	4,602.00	475.52	317.07	121.71	9.00	8.90	-1.46	
PS 3										
4,850.00	71.40	318.66	4,611.42	495.19	299.89	147.79	9.00	8.90	-1.42	
4,900.00	75.85	317.98	4,625.51	531.00	267.99	195.71	9.00	8.90	-1.36	
4,919.56	77.60	317.72	4,630.00	545.12	255.22	214.74	9.00	8.91	-1.32	
PS2 (Reference Formation)										
4,950.00	80.31	317.33	4,635.83	567.15	235.05	244.60	9.00	8.91	-1.30	
5,000.00	84.76	316.69	4,642.33	603.40	201.25	294.16	9.00	8.91	-1.28	
5,050.00	89.22	316.06	4,644.95	639.53	166.80	344.07	9.00	8.91	-1.26	
5,055.28	89.69	315.99	4,645.00	643.33	163.14	349.35	9.00	8.91	-1.25	
5,100.00	89.69	315.99	4,645.24	675.50	132.07	394.07	0.00	0.00	0.00	
5,200.00	89.69	315.99	4,645.78	747.42	62.59	494.07	0.00	0.00	0.00	
5,204.81	89.69	315.99	4,645.81	750.88	59.25	498.88	0.00	0.00	0.00	
7"										
5,300.00	89.69	315.99	4,646.33	819.34	-6.88	594.07	0.00	0.00	0.00	
5,400.00	89.69	315.99	4,646.87	891.26	-76.36	694.07	0.00	0.00	0.00	

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well S Escavada UT 351H
Company:	WPX Energy	TVD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Site:	S Escavada UT 350 Pad	North Reference:	True
Well:	S Escavada UT 351H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,500.00	89.69	315.99	4,647.41	963.19	-145.83	794.07	0.00	0.00	0.00
5,600.00	89.69	315.99	4,647.95	1,035.11	-215.31	894.06	0.00	0.00	0.00
5,700.00	89.69	315.99	4,648.50	1,107.03	-284.79	994.06	0.00	0.00	0.00
5,800.00	89.69	315.99	4,649.04	1,178.95	-354.26	1,094.06	0.00	0.00	0.00
5,900.00	89.69	315.99	4,649.58	1,250.88	-423.74	1,194.06	0.00	0.00	0.00
6,000.00	89.69	315.99	4,650.12	1,322.80	-493.21	1,294.06	0.00	0.00	0.00
6,100.00	89.69	315.99	4,650.66	1,394.72	-562.69	1,394.06	0.00	0.00	0.00
6,200.00	89.69	315.99	4,651.21	1,466.64	-632.16	1,494.06	0.00	0.00	0.00
6,300.00	89.69	315.99	4,651.75	1,538.57	-701.64	1,594.05	0.00	0.00	0.00
6,400.00	89.69	315.99	4,652.29	1,610.49	-771.12	1,694.05	0.00	0.00	0.00
6,500.00	89.69	315.99	4,652.83	1,682.41	-840.59	1,794.05	0.00	0.00	0.00
6,600.00	89.69	315.99	4,653.38	1,754.33	-910.07	1,894.05	0.00	0.00	0.00
6,700.00	89.69	315.99	4,653.92	1,826.26	-979.54	1,994.05	0.00	0.00	0.00
6,800.00	89.69	315.99	4,654.46	1,898.18	-1,049.02	2,094.05	0.00	0.00	0.00
6,900.00	89.69	315.99	4,655.00	1,970.10	-1,118.49	2,194.04	0.00	0.00	0.00
7,000.00	89.69	315.99	4,655.54	2,042.02	-1,187.97	2,294.04	0.00	0.00	0.00
7,100.00	89.69	315.99	4,656.09	2,113.95	-1,257.44	2,394.04	0.00	0.00	0.00
7,200.00	89.69	315.99	4,656.63	2,185.87	-1,326.92	2,494.04	0.00	0.00	0.00
7,300.00	89.69	315.99	4,657.17	2,257.79	-1,396.40	2,594.04	0.00	0.00	0.00
7,400.00	89.69	315.99	4,657.71	2,329.71	-1,465.87	2,694.04	0.00	0.00	0.00
7,500.00	89.69	315.99	4,658.26	2,401.64	-1,535.35	2,794.04	0.00	0.00	0.00
7,600.00	89.69	315.99	4,658.80	2,473.56	-1,604.82	2,894.03	0.00	0.00	0.00
7,700.00	89.69	315.99	4,659.34	2,545.48	-1,674.30	2,994.03	0.00	0.00	0.00
7,800.00	89.69	315.99	4,659.88	2,617.40	-1,743.77	3,094.03	0.00	0.00	0.00
7,900.00	89.69	315.99	4,660.42	2,689.33	-1,813.25	3,194.03	0.00	0.00	0.00
8,000.00	89.69	315.99	4,660.97	2,761.25	-1,882.73	3,294.03	0.00	0.00	0.00
8,100.00	89.69	315.99	4,661.51	2,833.17	-1,952.20	3,394.03	0.00	0.00	0.00
8,200.00	89.69	315.99	4,662.05	2,905.09	-2,021.68	3,494.03	0.00	0.00	0.00
8,300.00	89.69	315.99	4,662.59	2,977.02	-2,091.15	3,594.02	0.00	0.00	0.00
8,400.00	89.69	315.99	4,663.14	3,048.94	-2,160.63	3,694.02	0.00	0.00	0.00
8,500.00	89.69	315.99	4,663.68	3,120.86	-2,230.10	3,794.02	0.00	0.00	0.00
8,600.00	89.69	315.99	4,664.22	3,192.78	-2,299.58	3,894.02	0.00	0.00	0.00
8,700.00	89.69	315.99	4,664.76	3,264.71	-2,369.05	3,994.02	0.00	0.00	0.00
8,800.00	89.69	315.99	4,665.30	3,336.63	-2,438.53	4,094.02	0.00	0.00	0.00
8,900.00	89.69	315.99	4,665.85	3,408.55	-2,508.01	4,194.02	0.00	0.00	0.00
9,000.00	89.69	315.99	4,666.39	3,480.47	-2,577.48	4,294.01	0.00	0.00	0.00
9,100.00	89.69	315.99	4,666.93	3,552.40	-2,646.96	4,394.01	0.00	0.00	0.00
9,200.00	89.69	315.99	4,667.47	3,624.32	-2,716.43	4,494.01	0.00	0.00	0.00
9,300.00	89.69	315.99	4,668.01	3,696.24	-2,785.91	4,594.01	0.00	0.00	0.00
9,400.00	89.69	315.99	4,668.56	3,768.16	-2,855.38	4,694.01	0.00	0.00	0.00
9,500.00	89.69	315.99	4,669.10	3,840.09	-2,924.86	4,794.01	0.00	0.00	0.00
9,600.00	89.69	315.99	4,669.64	3,912.01	-2,994.33	4,894.01	0.00	0.00	0.00
9,700.00	89.69	315.99	4,670.18	3,983.93	-3,063.81	4,994.00	0.00	0.00	0.00
9,800.00	89.69	315.99	4,670.73	4,055.85	-3,133.29	5,094.00	0.00	0.00	0.00
9,900.00	89.69	315.99	4,671.27	4,127.78	-3,202.76	5,194.00	0.00	0.00	0.00
10,000.00	89.69	315.99	4,671.81	4,199.70	-3,272.24	5,294.00	0.00	0.00	0.00
10,100.00	89.69	315.99	4,672.35	4,271.62	-3,341.71	5,394.00	0.00	0.00	0.00
10,200.00	89.69	315.99	4,672.89	4,343.54	-3,411.19	5,494.00	0.00	0.00	0.00
10,300.00	89.69	315.99	4,673.44	4,415.47	-3,480.66	5,593.99	0.00	0.00	0.00
10,400.00	89.69	315.99	4,673.98	4,487.39	-3,550.14	5,693.99	0.00	0.00	0.00
10,500.00	89.69	315.99	4,674.52	4,559.31	-3,619.62	5,793.99	0.00	0.00	0.00
10,600.00	89.69	315.99	4,675.06	4,631.23	-3,689.09	5,893.99	0.00	0.00	0.00

Scientific Drilling Int.

Planning Report

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Company:	WPX Energy	TVD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Site:	S Escavada UT 350 Pad	North Reference:	True
Well:	S Escavada UT 351H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.00	89.69	315.99	4,675.61	4,703.16	-3,758.57	5,993.99	0.00	0.00	0.00
10,800.00	89.69	315.99	4,676.15	4,775.08	-3,828.04	6,093.99	0.00	0.00	0.00
10,900.00	89.69	315.99	4,676.69	4,847.00	-3,897.52	6,193.99	0.00	0.00	0.00
11,000.00	89.69	315.99	4,677.23	4,918.92	-3,966.99	6,293.98	0.00	0.00	0.00
11,100.00	89.69	315.99	4,677.77	4,990.85	-4,036.47	6,393.98	0.00	0.00	0.00
11,200.00	89.69	315.99	4,678.32	5,062.77	-4,105.94	6,493.98	0.00	0.00	0.00
11,300.00	89.69	315.99	4,678.86	5,134.69	-4,175.42	6,593.98	0.00	0.00	0.00
11,400.00	89.69	315.99	4,679.40	5,206.61	-4,244.90	6,693.98	0.00	0.00	0.00
11,500.00	89.69	315.99	4,679.94	5,278.54	-4,314.37	6,793.98	0.00	0.00	0.00
11,510.50	89.69	315.99	4,680.00	5,286.09	-4,321.67	6,804.48	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SEU351H POE	0.00	0.00	4,645.00	750.58	58.49	1,859,570.97	582,271.88	36.110474	-107.554806
- plan misses target center by 1.11usft at 5205.13usft MD (4645.81 TVD, 751.11 N, 59.03 E)									
- Point									
SEU351H BHL	0.00	0.00	4,680.00	5,286.09	-4,321.67	1,864,093.91	577,878.76	36.122933	-107.569637
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
5,204.81	4,645.81	7"	7	8-3/4	

Scientific Drilling Int.

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well S Escavada UT 351H
Company:	WPX Energy	TVD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Project:	Sandoval County, NM 3003 West	MD Reference:	GL 6749 + KB 21 = @ 6770.00usft (Cyclone 32)
Site:	S Escavada UT 350 Pad	North Reference:	True
Well:	S Escavada UT 351H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
451.00	451.00	Ojo Alamo			
663.37	663.00	Kirtland			
1,126.50	1,121.00	Picture Cliffs			
1,163.99	1,158.00	Lewis			
1,441.67	1,432.00	Chacra			
2,554.38	2,530.00	Cliff House			
2,576.68	2,552.00	Menefee			
3,384.36	3,349.00	Point Lookout			
3,615.42	3,577.00	Mancos			
3,932.61	3,890.00	Gallup			
4,140.17	4,095.00	Gallup Upper			
4,498.19	4,416.00	Mancos Lwr			
4,519.44	4,432.00	El Vado			
4,704.70	4,550.00	Frac Barrier			
4,704.70	4,550.00	Mancos Unc			
4,822.24	4,602.00	PS 3			
4,919.56	4,630.00	PS2 (Reference Formation)			

4.6 Construction Material

Construction material would consist of native material at the site locations. All features would be built with a balanced cut and fill, such that all material would be native. Topsoil would be stripped and placed as a berm along the outer edge of the pad or as a windrow along the edge of the access and/or well-connect pipeline corridor. Topsoil would be stored separately and protected for use during interim reclamation. Subsoil horizons from cuts would be used as fill material to establish a level working surface, and to construct earthen berms where necessary.

Sandstone would be used as surfacing material along the road if natural occurring binding material is not present in sufficient amounts within the existing soil and subsoil. If sandstone is needed for surfacing, the sandstone would be retrieved from a permitted location.

WPX would likely need to permit the expansion of existing rock quarry pits in the area to provide surfacing materials for construction. If a new rock quarry pit is needed and identified, WPX would pursue permitting as a separate action.

Construction and maintenance activities would cease if soil or road surfaces become saturated to the extent that construction equipment is unable to stay within the project area and/or when activities cause irreparable harm to roads, soils, or streams.

4.7 Waste

4.7.1 Cuttings

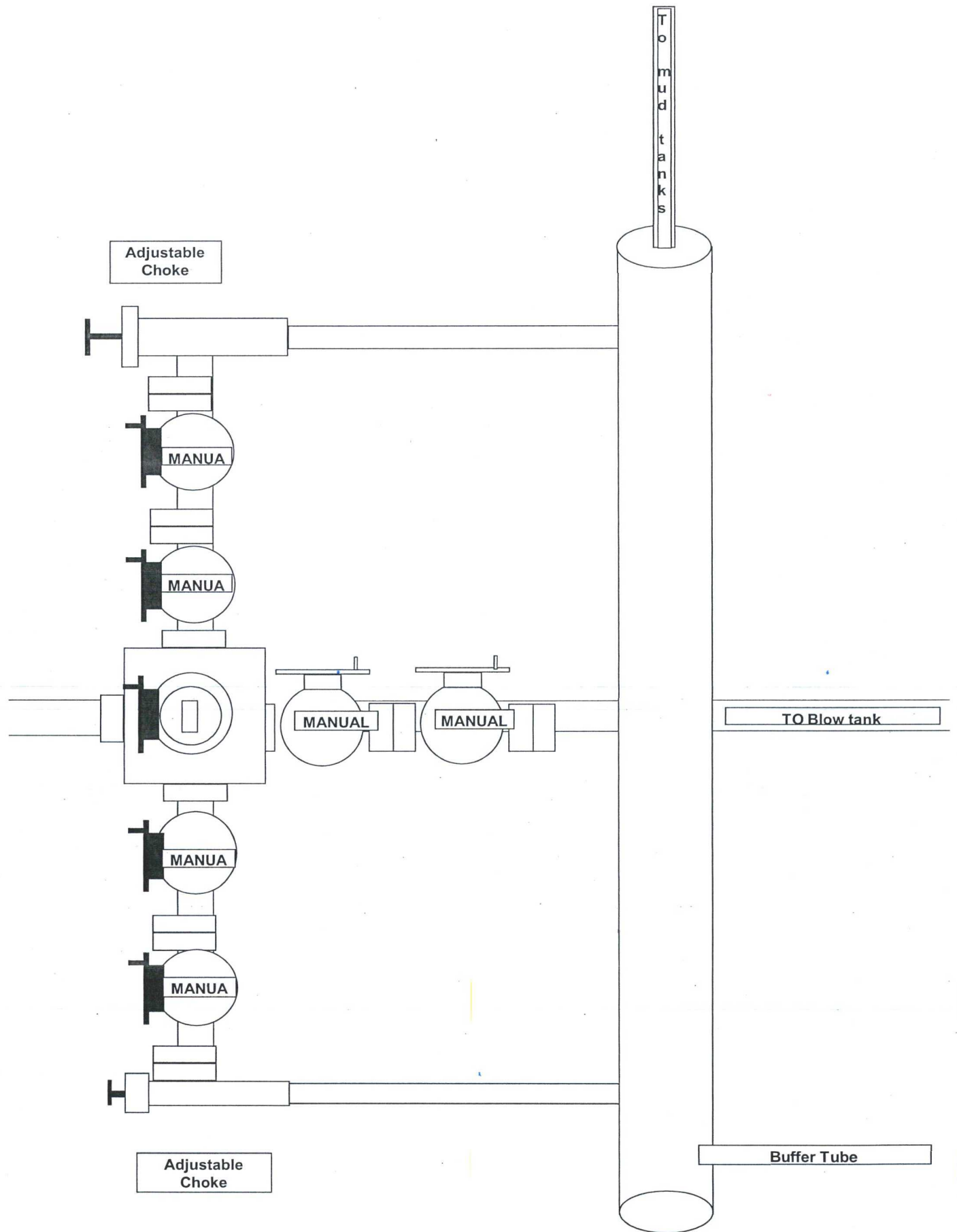
✓ Drilling operations would utilize a closed-loop system. Drilling of the horizontal laterals would be accomplished with water-based mud. All cuttings would be placed in roll-off bins and hauled to a commercial disposal facility or land farm. WPX would follow Onshore Oil and Gas Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit would be used. Closed-loop tanks would be adequately sized for containment of all fluids.

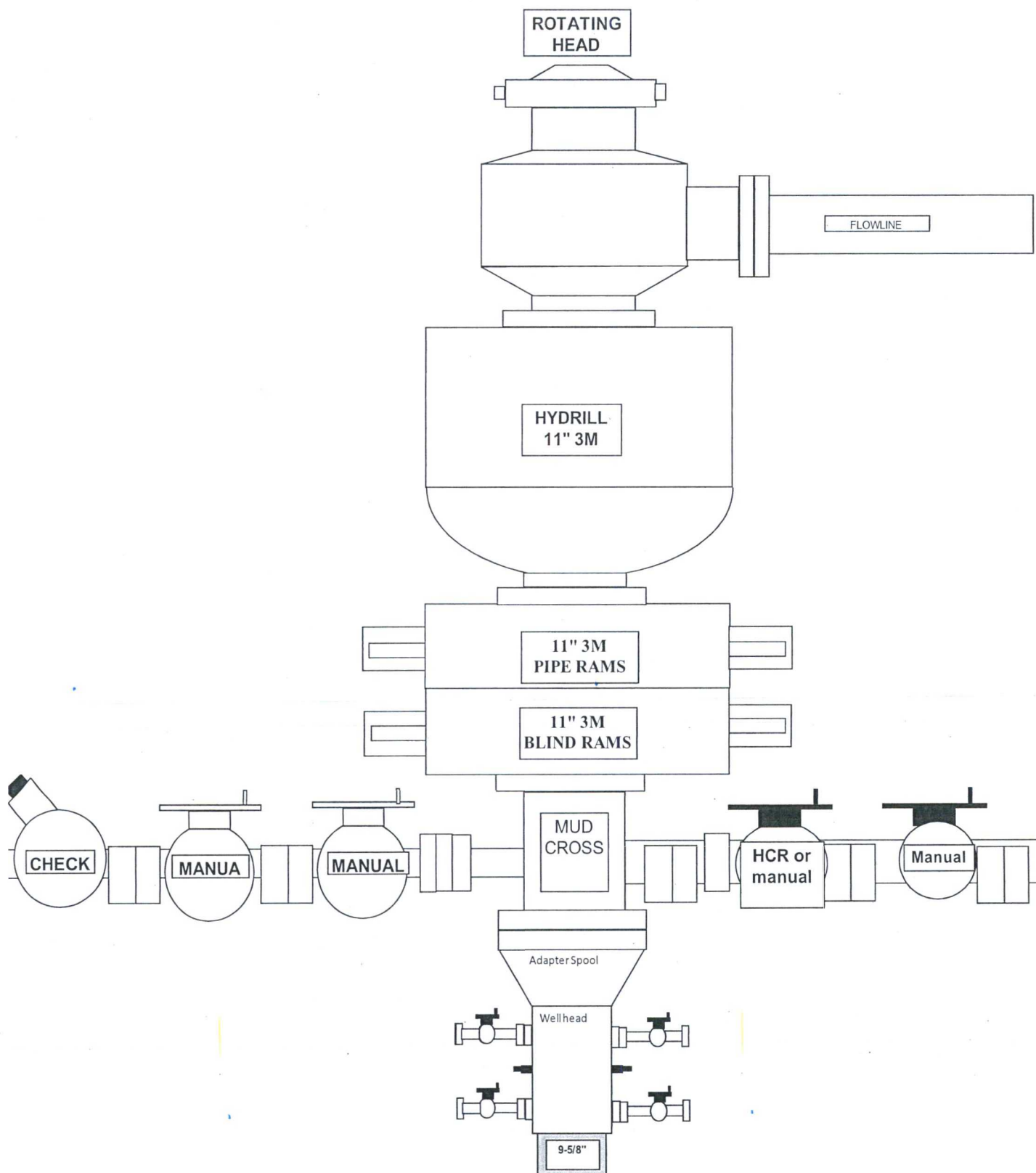
4.7.2 Drilling Fluids

Drilling fluids would be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids would be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids would be hauled to a commercial disposal facility.

4.7.3 Spills

Upon discovery of a spill of oil, gas, or any other potentially hazardous substance, actions would be implemented to stop the release source and secure the site, unless the action could result in a threat to personal or public safety. Spill notifications would be made according to applicable federal and state regulations. Appropriate measures for cleanup would be implemented, and the spill remediated in accordance with applicable federal and state regulations.





Directions from the Intersection of US Hwy 550 & US Hwy 64
in Bloomfield, NM to WPX Energy Production, LLC S Escavada Unit #351H
2087' FSL & 417' FEL, Section 27, T22N, R7W, N.M.P.M., Sandoval County, NM

Latitude: 36.108428°N Longitude: 107.555611°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 53.6 miles to Mile Marker 97.7;

Go Right (Southerly) on Indian Service Route #474 for 4.6 miles to fork in roadway;

Go Right (Westerly) exiting Indian Service Route #474 for 2.5 miles to fork in roadway;

Go Right (Westerly) which is straight for 0.4 miles to fork in roadway;

Go Right (Westerly) which is straight for 0.9 miles to 4-way intersection;

Go Straight (Westerly) for 1.2 miles to 4-way intersection;

Go Left (Southerly) for 1.7 miles to 4-way intersection;

Go Straight (Southerly) for 1.9 miles to fork in roadway;

Go Left (Southerly) which is straight for 0.4 miles to 4-way intersection;

Go Straight (Southerly) for 0.3 miles to new access on left-hand side of existing roadway which continues for an additional 3806.8' to staked WPX S Escavada Unit #351H location.