15-643

Form 3160-3
(August 2007)

OCD-Artesia

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
SHL: NMNM015302 BHL: NM 111533

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Corral Canyon Federal #13H

2. Name of Operator XTO Energy, Incorporated

9. API Well No.
30-015-43493

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
500 W. Illinois St., Ste 100 Midland, TX 79701	432-620-6714	Corral Canyon; Del, NW

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 190'FSL & 520'FEL
At proposed prod. zone 2310'FSL & 940'FWL 32-T24S-R29E

11. Sec., T. R. M. or Blk. and Survey or Area
6-T25S-R29E

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
6 MI SE Of Malaga, New Mexico	Eddy County	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
520'	1917.02	239.44

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
50' (to CC Fed #1H)	TVD: 6340' MD: 13,810'	UTB000138

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
2912' GL		60 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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
Stephanie Rabadue	Stephanie Rabadue	04/14/2014

Title
Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Steve Caffey		NOV 20 2015
Title: FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

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.

APPROVAL FOR TWO YEARS

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)

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 30 2015
RECEIVED

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 30 2015
RECEIVED

12/7/2015

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

XTO ENERGY

Certification

April 14, 2015

Stephanie Rabadue
XTO Energy Inc.
500 W. Illinois St Ste 100
Midland, TX 79701
432-620-6714
stephanie_rabadue@xtoenergy.com

Bureau of Land Management
620 E. Greene
Carlsbad, NM 88220
575-234-5972

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed in conformity with this APD package and terms and conditions under which it is approved. I also certify that I, or XTO Energy, Inc., am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 14th Day of April 2015.

Thank you,

Stephanie Rabadue

Stephanie Rabadue
Regulatory Analyst

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 Road, 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
30-015-43493	96464	Corral Canyon; Del, NW

Property Code	Property Name	Well Number
314121	CORRAL CANYON FEDERAL	13H

OGRID No.	Operator Name	Elevation
005380	XTO ENERGY	2912'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	6	25-S	29-E		190	SOUTH	520	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
L	32	24-S	29-E		2310	SOUTH	940	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
239.44			

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

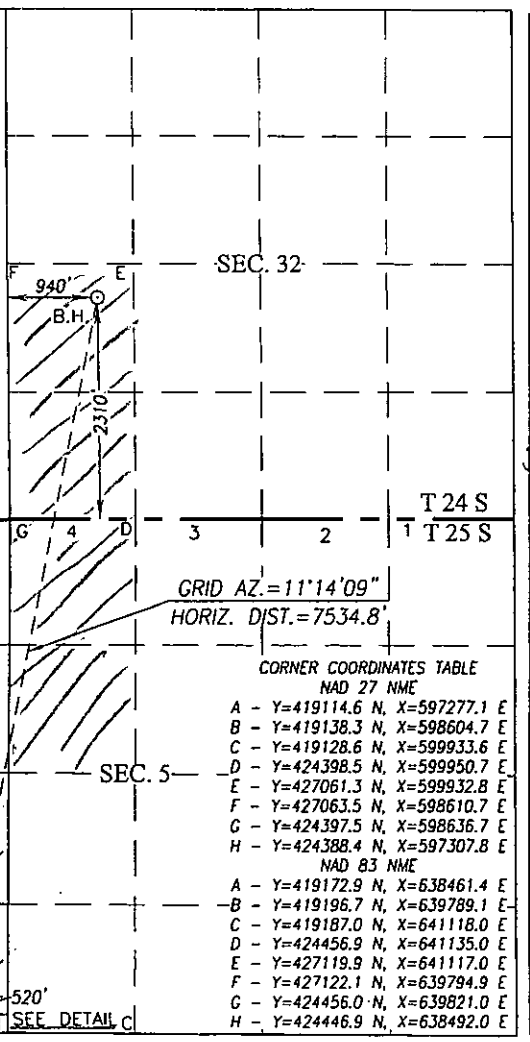
GEODETIC COORDINATES NAD 27 NME
BOTTOM HOLE LOCATION
Y=426707.6 N
X=599554.0 E
LAT.=32.172727° N
LONG.=104.011582° W

GEODETIC COORDINATES NAD 83 NME
BOTTOM HOLE LOCATION
Y=426766.2 N
X=640738.2 E
LAT.=32.172850° N
LONG.=104.012070° W

GEODETIC COORDINATES NAD 27 NME
SURFACE LOCATION
Y=419319.1 N
X=598085.9 E
LAT.=32.152428° N
LONG.=104.016397° W

GEODETIC COORDINATES NAD 83 NME
SURFACE LOCATION
Y=419377.5 N
X=639270.3 E
LAT.=32.152551° N
LONG.=104.016884° W

SCALE: 1"=2000'



CORNER COORDINATES TABLE
NAD 27 NME
A - Y=419114.6 N, X=597277.1 E
B - Y=419138.3 N, X=598604.7 E
C - Y=419128.6 N, X=599933.6 E
D - Y=424398.5 N, X=599950.7 E
E - Y=427061.3 N, X=599932.8 E
F - Y=427063.5 N, X=598610.7 E
G - Y=424397.5 N, X=598636.7 E
H - Y=424388.4 N, X=597307.8 E
NAD 83 NME
A - Y=419172.9 N, X=638461.4 E
B - Y=419196.7 N, X=639789.1 E
C - Y=419187.0 N, X=641118.0 E
D - Y=424456.9 N, X=641135.0 E
E - Y=427119.9 N, X=641117.0 E
F - Y=427122.1 N, X=639794.9 E
G - Y=424456.0 N, X=639821.0 E
H - Y=424446.9 N, X=638492.0 E

OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Stephanie Rabadue 4.14.15
Signature Date

Stephanie Rabadue
Printed Name

Stephanie_rabadue@xtoenergy.com
E-mail Address

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.

APRIL 2, 2014
Date of Survey

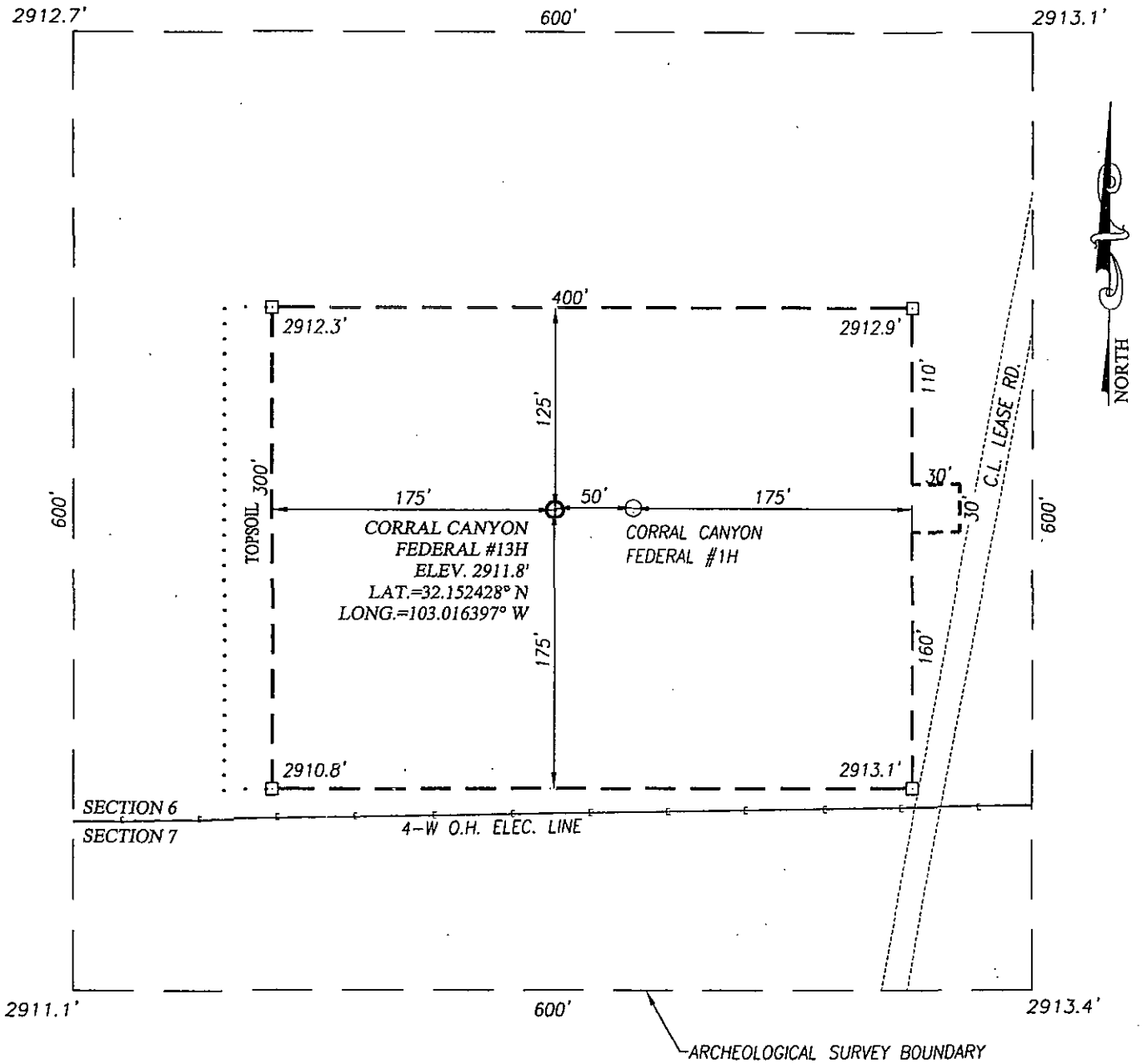
Signature & Seal of Professional Surveyor:

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

Ronald J. Eidson 05/29/2014

Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

ACK REV. 5/28/14 JWSC W.O.: 14.11.0215



DIRECTIONS TO CORRAL CANYON FEDERAL #2H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND FOLLOW WINDING ROAD WEST APPROX. 1.3 MILES. THE LOCATION STAKE IS APPROX. 400 FEET SOUTH.

100 0 100 200 Feet

Scale: 1"=100'

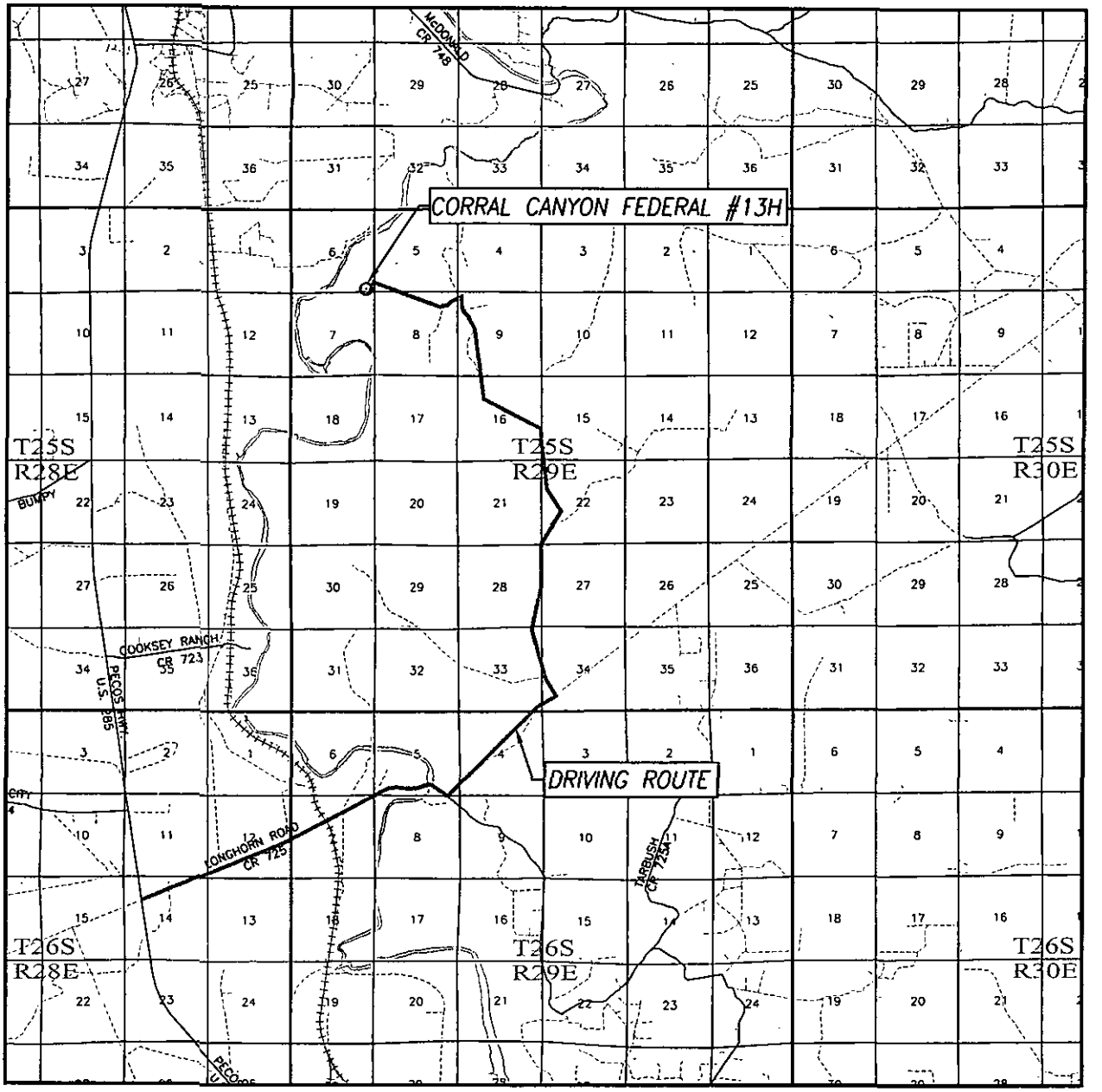
XTO ENERGY

CORRAL CANYON FEDERAL #13H WELL
LOCATED 190 FEET FROM THE SOUTH LINE
AND 520 FEET FROM THE EAST LINE OF SECTION 6,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 4/2/14	CAD Date: 5/16/14	Drawn By: ACK
W.O. No.: 14110215	Rev: .	Rel. W.O.:	Sheet 1 of 1

VICINITY MAP



SCALE: 1" = 2 MILES

DRIVING ROUTE: SEE LOCATION VERIFICATION MAP

SEC. 6 TWP. 25-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 190' FSL & 520' FEL

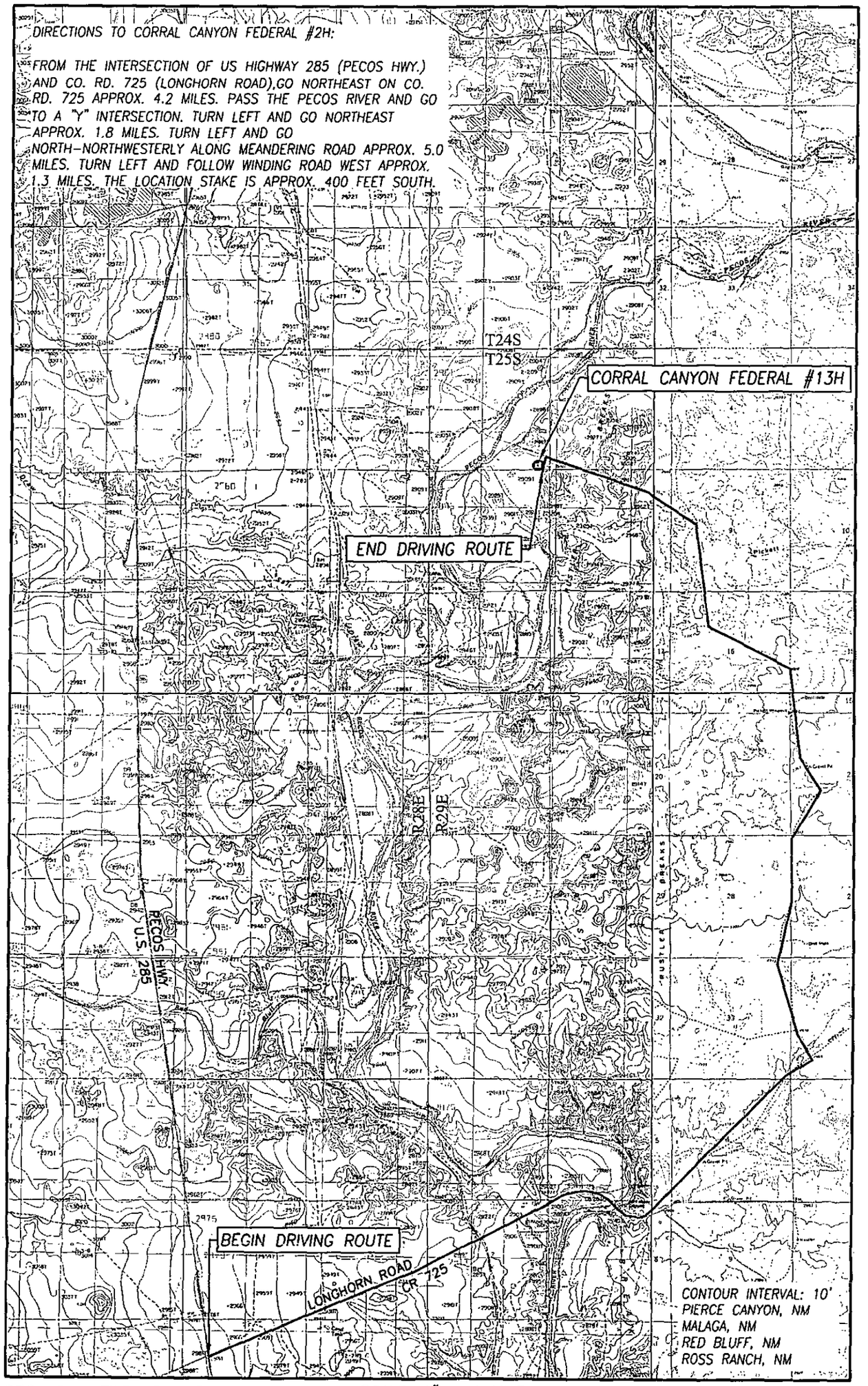
ELEVATION 2912'

OPERATOR XTO ENERGY

LEASE CORRAL CANYON FEDERAL

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

LOCATION VERIFICATION MAP



SEC. 6 TWP. 25-S RGE. 29-E
COUNTY EDDY STATE NEW MEXICO
DESCRIPTION 190' FSL & 520' FEL
ELEVATION 2912'
OPERATOR XTO ENERGY
LEASE CORRAL CANYON FEDERAL
U.S.G.S. TOPOGRAPHIC MAP
MALAGA, N.M. SURVEY N.M.P.M.

SCALE: 1" = 1 MILE

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

DRILLING PLAN: BLM COMPLIANCE
(Supplement to BLM 3160-3)

XTO Energy Inc.
Corral Canyon Fed 13H
Projected TD: 13810' MD / 6340' TVD
SHL: 190' FSL & 520' FEL, SECTION 6, T25S, R29E
BHL: 2310' FSL & 940' FWL, SECTION 32, T24S, R29E
Eddy County, NM

1. GEOLOGIC NAME OF SURFACE FORMATION:

A. Quaternary

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Formation	Well Depth (TVD)	Water / Oil / Gas
Rustler	240'	Water
Top of Salt	651'	
Base of Salt	2544'	
Delaware	2800'	Water
Cherry Canyon	3663'	Water
Brushy Canyon	5236'	Water/Oil/Gas
Brushy Canyon E3	6307'	Water/Oil/Gas
Target/Land Curve	6340'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon
*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13-3/8" casing @ ~~625'~~ 280 above the salt and circulating cement back to surface. The salt will be isolated by setting 9-5/8" casing at 2775' and circulating cement to surface. An 8-3/4" curve and lateral hole will be drilled to MD/TD and 5-1/2" casing with sliding frac sleeves will be set at TD and cemented back up to the 9-5/8" casing shoe.

3. CASING PROGRAM:

See COA

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' – ~~625'~~ 280	13-3/8"	48#	STC	H-40	New	5.77	2.59	10.73
12-1/4"	0' – 2775'	9-5/8"	36#	LTC	J-55	New	2.93	1.37	4.53
8-3/4"	0' – 13810'	5-1/2"	17#	BTC	P-110	New	1.12	2.52	2.42

WELLHEAD:

A. Starting Head: 13-5/8" 3000 psi top flange x 13-3/8" SOW bottom
B. 'B' Section/ Drilling Spool: 13-5/8" 3000psi bottom flange x 11" 5M top flange
C. Tubing Head: 11" 5000psi bottom flange x 7-1/16" 10,000psi top flange

4. CEMENT PROGRAM:

A. **Surface Casing:** 13-3/8", 48#, NEW H-40, STC casing to be set at ± ~~625'~~ 280'.

640 sx HalCem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft^3/sk, 6.39 gal/sx wtr)

***All volumes 100% excess in open hole. Cement to surface.

B. **Intermediate Casing:** 9-5/8", 36#, NEW J-55, LTC casing to be set at ± 2775'.

Lead: 20 bbls FW, then 750 sx EconoCem-HLC + 5% salt + 5 lbm/sk Kol-Seal (mixed at 12.9 ppg, 1.88 ft^3/sk, 9.61 gal/sx wtr)

Tail: 250 sx HalCem-C (mixed at 14.8 ppg, 1.33 ft^3/sk, 6.34 gal/sx wtr)

***All volumes 100% excess in open hole. Cement to surface.

C. **Production Casing:** 5-1/2", 17#, NEW P-110, BTC casing to be set at ± 13810'. Casing will be cemented and will include sliding sleeves for the completion.

Lead: 20 bbls FW, then 320 sx Tuned Light + 0.5 lbm/sk CFR-3 + 1.5 lbm/sk salt + 0.1% HR601 (mixed at 10.5 ppg, 2.69 ft^3/sk, 12.26 gal/sx wtr)

Tail: 1830 sx VersaCem + 0.5% LAP-2 + 0.25 lbm/sk D-air 5000 + 0.2% HR 601 (mixed at 13.2 ppg, 1.59 ft^3/sk, 8.29 gal/sx wtr)

***All volumes 30% excess in open hole. Planned top of cement 500' into intermediate casing shoe

5. PRESSURE CONTROL EQUIPMENT:

The blow out preventer equipment (BOP) for this well consists of a 13-5/8" minimum 3M Hydril and a 13-5/8" minimum 3M Double Ram BOP. Max bottom hole pressure should not exceed 3000 psi.

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nippling up on the 13-5/8" 3M bradenhead and flange, the BOP test will be limited to 3000 psi. When nippling up on the 9-5/8", the BOP will be tested to a minimum of 3000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 3M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

See COA A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

6. PROPOSED MUD CIRCULATION SYSTEM:

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 625' 280	17-1/2"	FW/Native	8.4 - 8.8	35 - 40	NC
625' to 2775'	12-1/4"	Brine/Gel Sweeps	9.8 - 10.2	30 - 32	NC
2775' to 13810'	8-3/4"	FW / Cut Brine / Poly-Sweeps	8.4 - 9.0	29 - 32	NC - 20

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Spud with fresh water/native mud. Drill out from under 13-3/8" surface casing with brine solution. A 9.8ppg-10.2ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

A. A Kelly cock will be in the drill string at all times.
B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
C. H2S monitors will be on location when drilling below the 13-3/8" casing.

8. LOGGING, CORING AND TESTING PROGRAM:

See COA

Mud Logger: Mud Logging Unit (2 man) on @ 2775'.
Catch 20' samples from 2775' to landing point
Catch 30' samples from landing point to TD/MD.
Send 1 set of dry samples to Midland Sample Library.

Open hole logging to include Density/Neutron/PE/Dual Laterlog/Spectral Gamma from kick-off point to intermediate casing shoe.

9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS:

See COA

None anticipated. BHT of 130 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

Road and location construction will begin after Santa Fe and BLM have approved the APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 40 days. If production casing is run, an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

XTOENERGY

Project: Eddy County, NM (NAD 27)
Site: Corral Canyon Federal
Well: Corral Canyon Federal 13H
Wellbore: WB#1/Job#:
Design: Plan#1 103014
Rig: Nabors 730

PHOENIX TECHNOLOGY SERVICES

Azimuths to Grid North
True North: -0.17°
Magnetic North: 7.20°

Magnetic Field
Strength: 48191.5snT
Dip Angle: 59.96°
Date: 10/30/2014
Model: IGRF2010_14

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	5428.97	0.00	0.00	5428.97	0.00	0.00	0.00	0.00	0.00		KOP, Start 8.00°/100' Build
3	6178.97	60.00	72.00	6049.22	110.66	340.57	8.00	72.00	174.91		Hold 60° Inc. for 180°
4	6358.97	60.00	72.00	6139.22	158.83	488.83	0.00	0.00	251.05		Start 10.00°/100' Build
5	7059.47	90.00	5.20	6340.00	666.20	855.96	10.00	-77.50	820.25	BHL Corral Canyon Federal 13H	LP, Hold 90.00° Inc
6	13809.58	90.00	5.20	6340.00	7388.50	1458.10	0.00	0.00	7532.94	BHL Corral Canyon Federal 13H	TD at 13809.58

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BHL Corral Canyon Federal 13H	6340.00	7388.50	1458.10	426707.60	599554.00	32° 10' 21.81716 N	104° 0' 41.69524 W	Point

- plan hits target center

WELL DETAILS

Ground Level: 2912.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	419319.10	598085.90	32° 9' 8.74126 N	104° 0' 59.02940 W

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

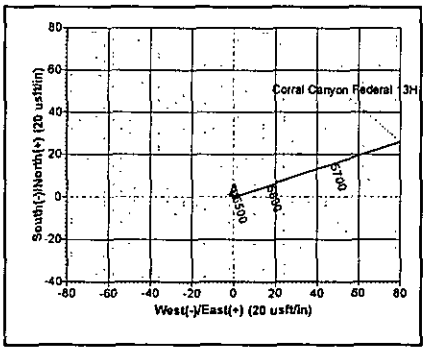
Local Origin: Well Corral Canyon Federal 13H, Grid North

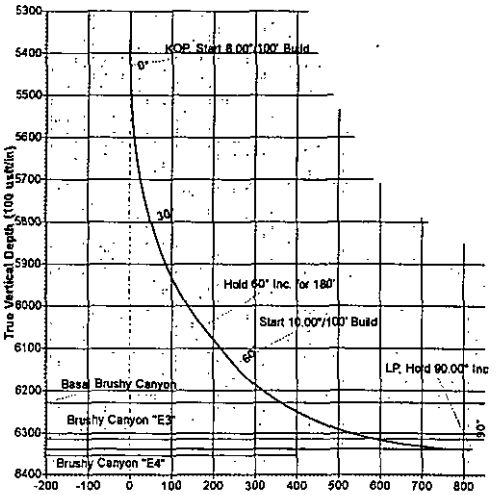
Latitude: 32° 9' 8.74126 N
Longitude: 104° 0' 59.02940 W

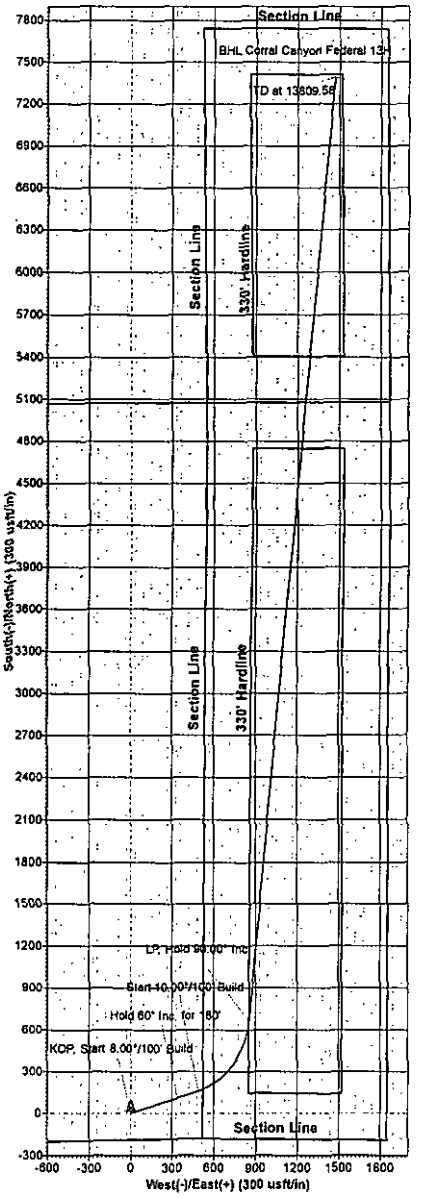
Grid East: 598085.90
Grid North: 419319.10
Scale Factor: 1.000

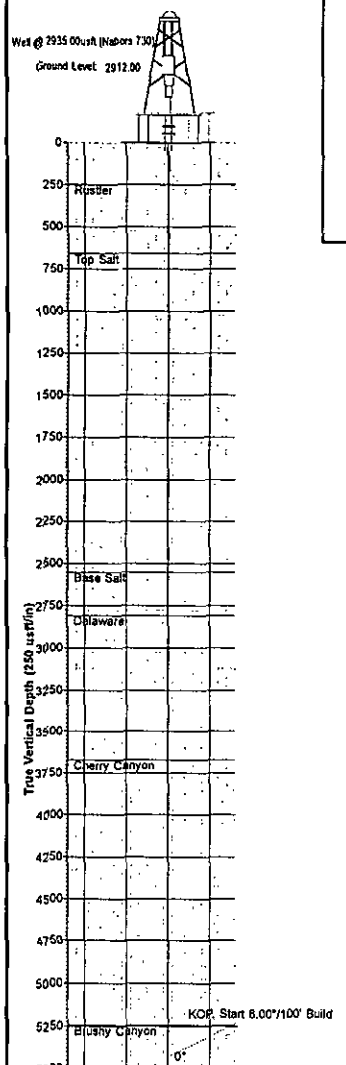
Geomagnetic Model: IGRF2010_14
Sample Date: 30-Oct-14
Magnetic Declination: 7.37°
Dip Angle from Horizontal: 59.96°
Magnetic Field Strength: 48191

To convert a Magnetic Direction to a Grid Direction, Add 7.20°
To convert a Magnetic Direction to a True Direction, Add 7.37° East
To convert a True Direction to a Grid Direction, Subtract 0.17°



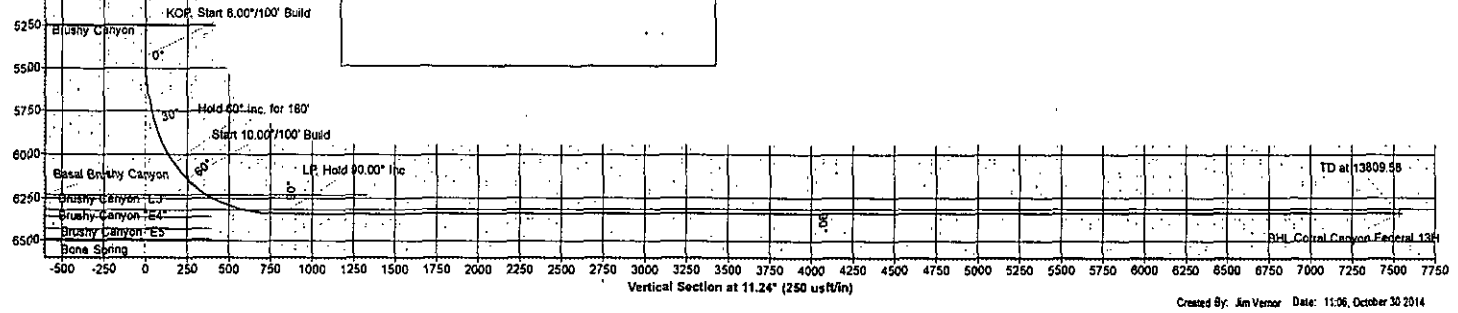






FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
246.00	246.00	Rustler	0.00	11.24
657.00	657.00	Top Salt	0.00	11.24
2550.00	2550.00	Base Salt	0.00	11.24
2806.00	2806.00	Delaware	0.00	11.24
3669.00	3669.00	Cherry Canyon	0.00	11.24
5242.00	5242.00	Brushy Canyon	0.00	11.24
6228.00	6551.83	Basal Brushy Canyon	0.00	11.24
6313.00	6816.50	Brushy Canyon "E3"	0.00	11.24



Created By: Jim Vernor Date: 11:06, October 30 2014

XTOENERGY

XTO Energy Inc

Eddy County, NM (NAD 27)
Corral Canyon Federal
Corral Canyon Federal 13H

WB#1/Job#:

Plan: Plan#1 103014

Standard Planning Report

30 October, 2014

PHOENIX
TECHNOLOGY SERVICES

Database:	Compass 5000 GCR epdm	**Local Co-ordinate Reference:**	Well Corral Canyon Federal 13H
Company:	XTO Energy Inc	**TVD Reference:**	Well @ 2935.00usft (Nabors 730)
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	Well @ 2935.00usft (Nabors 730)
Site:	Corral Canyon Federal	**North Reference:**	Grid
Well:	Corral Canyon Federal 13H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB#1/Job#:		
Design:	Plan#1 103014		

Project Eddy County, NM (NAD 27)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Corral Canyon Federal

Site Position:		**Northing:**	419,285.50 usft	**Latitude:**	32° 9' 8.30126 N
From:	Map	**Easting:**	601,708.20 usft	**Longitude:**	104° 0' 16.89527 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.17 °

Well Corral Canyon Federal 13H

Well Position	**+N/-S**	33.60 usft	**Northing:**	419,319.10 usft	**Latitude:**	32° 9' 8.74126 N
	+E/-W	-3,622.30 usft	**Easting:**	598,085.90 usft	**Longitude:**	104° 0' 59.02940 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	2,912.00 usft

Wellbore WB#1/Job#:

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	10/30/2014	7.37	59.96	48,191

Design Plan#1 103014

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	11.24

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	
5,428.97	0.00	0.00	5,428.97	0.00	0.00	0.00	0.00	0.00	0.00	
6,178.97	60.00	72.00	6,049.22	110.66	340.57	8.00	8.00	0.00	72.00	
6,358.97	60.00	72.00	6,139.22	158.83	488.83	0.00	0.00	0.00	0.00	
7,059.47	90.00	5.20	6,340.00	666.20	855.98	10.00	4.28	-9.54	-77.90	BHL Corral Canyon F
13,809.58	90.00	5.20	6,340.00	7,388.50	1,468.10	0.00	0.00	0.00	0.00	BHL Corral Canyon F

Database:	Compass 5000 GCR epdm	**Local Co-ordinate Reference:**	Well Corral Canyon Federal 13H
Company:	XTO Energy Inc	**TVD Reference:**	Well @ 2935.00usft (Nabors 730)
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	Well @ 2935.00usft (Nabors 730)
Site:	Corral Canyon Federal	**North Reference:**	Grid
Well:	Corral Canyon Federal 13H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB#1/Job#:		
Design:	Plan#1 103014		

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
246.00	0.00	0.00	246.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
657.00	0.00	0.00	657.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
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
2,550.00	0.00	0.00	2,550.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
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
2,806.00	0.00	0.00	2,806.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
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
3,669.00	0.00	0.00	3,669.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	Compass 5000 GCR epdm	**Local Co-ordinate Reference:**	Well Corral Canyon Federal 13H
Company:	XTO Energy Inc	**TVD Reference:**	Well @ 2935.00usft (Nabors 730)
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	Well @ 2935.00usft (Nabors 730)
Site:	Corral Canyon Federal	**North Reference:**	Grid
Well:	Corral Canyon Federal 13H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB#1/Job#:		
Design:	Plan#1 103014		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,242.00	0.00	0.00	5,242.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,428.97	0.00	0.00	5,428.97	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Start 8.00°/100' Build									
5,500.00	5.68	72.00	5,499.88	1.09	3.35	1.72	8.00	8.00	0.00
5,600.00	13.68	72.00	5,598.38	6.28	19.33	9.93	8.00	8.00	0.00
5,700.00	21.68	72.00	5,693.58	15.66	48.19	24.75	8.00	8.00	0.00
5,800.00	29.68	72.00	5,783.63	29.04	89.38	45.90	8.00	8.00	0.00
5,900.00	37.68	72.00	5,866.77	46.16	142.08	72.97	8.00	8.00	0.00
6,000.00	45.68	72.00	5,941.39	66.70	205.27	105.42	8.00	8.00	0.00
6,100.00	53.68	72.00	6,006.04	90.24	277.73	142.64	8.00	8.00	0.00
6,178.97	60.00	72.00	6,049.22	110.66	340.57	174.91	8.00	8.00	0.00
Hold 60° Inc. for 180'									
6,200.00	60.00	72.00	6,059.73	116.29	357.89	183.81	0.00	0.00	0.00
6,300.00	60.00	72.00	6,109.73	143.05	440.26	226.11	0.00	0.00	0.00
6,358.97	60.00	72.00	6,139.22	158.83	488.83	251.05	0.00	0.00	0.00
Start 10.00°/100' Build									
6,400.00	60.94	67.41	6,159.45	171.21	522.29	269.72	10.00	2.29	-11.19
6,500.00	63.85	56.61	6,205.89	212.81	600.32	325.73	10.00	2.91	-10.80
6,551.83	65.67	51.24	6,228.00	240.42	638.18	360.18	10.00	3.51	-10.35
Basal Brushy Canyon									
6,600.00	67.52	46.40	6,247.14	269.52	671.43	395.21	10.00	3.85	-10.06
6,700.00	71.80	36.75	6,281.96	339.62	733.47	476.05	10.00	4.28	-9.64
6,800.00	76.54	27.60	6,309.27	420.98	784.55	565.81	10.00	4.74	-9.16
6,816.50	77.36	26.12	6,313.00	435.31	791.81	581.28	10.00	4.94	-8.92
Brushy Canyon "E3"									
6,900.00	81.60	18.80	6,328.27	511.12	823.11	661.74	10.00	5.08	-8.77
7,000.00	86.84	10.24	6,338.36	607.32	848.00	760.94	10.00	5.24	-8.56
7,059.47	90.00	5.20	6,340.00	666.20	855.98	820.25	10.00	5.31	-8.48
LP, Hold 90.00° Inc									
7,100.00	90.00	5.20	6,340.00	706.56	859.66	860.56	0.00	0.00	0.00
7,200.00	90.00	5.20	6,340.00	806.15	868.73	960.00	0.00	0.00	0.00
7,300.00	90.00	5.20	6,340.00	905.74	877.79	1,059.45	0.00	0.00	0.00
7,400.00	90.00	5.20	6,340.00	1,005.33	886.86	1,158.89	0.00	0.00	0.00
7,500.00	90.00	5.20	6,340.00	1,104.92	895.93	1,258.34	0.00	0.00	0.00
7,600.00	90.00	5.20	6,340.00	1,204.50	905.00	1,357.78	0.00	0.00	0.00
7,700.00	90.00	5.20	6,340.00	1,304.09	914.07	1,457.23	0.00	0.00	0.00
7,800.00	90.00	5.20	6,340.00	1,403.68	923.14	1,556.68	0.00	0.00	0.00
7,900.00	90.00	5.20	6,340.00	1,503.27	932.20	1,656.12	0.00	0.00	0.00
8,000.00	90.00	5.20	6,340.00	1,602.86	941.27	1,755.57	0.00	0.00	0.00
8,100.00	90.00	5.20	6,340.00	1,702.44	950.34	1,855.01	0.00	0.00	0.00
8,200.00	90.00	5.20	6,340.00	1,802.03	959.41	1,954.46	0.00	0.00	0.00

Database:	Compass 5000 GCR epdm	**Local Co-ordinate Reference:**	Well Corral Canyon Federal 13H
Company:	XTO Energy Inc	**TVD Reference:**	Well @ 2935.00usft (Nabors 730)
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	Well @ 2935.00usft (Nabors 730)
Site:	Corral Canyon Federal	**North Reference:**	Grid
Well:	Corral Canyon Federal 13H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB#1/Job#:		
Design:	Plan#1 103014		

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)
8,300.00	90.00	5.20	6,340.00	1,901.62	968.48	2,053.90	0.00	0.00	0.00
8,400.00	90.00	5.20	6,340.00	2,001.21	977.55	2,153.35	0.00	0.00	0.00
8,500.00	90.00	5.20	6,340.00	2,100.80	986.61	2,252.80	0.00	0.00	0.00
8,600.00	90.00	5.20	6,340.00	2,200.38	995.68	2,352.24	0.00	0.00	0.00
8,700.00	90.00	5.20	6,340.00	2,299.97	1,004.75	2,451.69	0.00	0.00	0.00
8,800.00	90.00	5.20	6,340.00	2,399.56	1,013.82	2,551.13	0.00	0.00	0.00
8,900.00	90.00	5.20	6,340.00	2,499.15	1,022.89	2,650.58	0.00	0.00	0.00
9,000.00	90.00	5.20	6,340.00	2,598.74	1,031.95	2,750.02	0.00	0.00	0.00
9,100.00	90.00	5.20	6,340.00	2,698.32	1,041.02	2,849.47	0.00	0.00	0.00
9,200.00	90.00	5.20	6,340.00	2,797.91	1,050.09	2,948.92	0.00	0.00	0.00
9,300.00	90.00	5.20	6,340.00	2,897.50	1,059.16	3,048.36	0.00	0.00	0.00
9,400.00	90.00	5.20	6,340.00	2,997.09	1,068.23	3,147.81	0.00	0.00	0.00
9,500.00	90.00	5.20	6,340.00	3,096.68	1,077.30	3,247.25	0.00	0.00	0.00
9,600.00	90.00	5.20	6,340.00	3,196.26	1,086.36	3,346.70	0.00	0.00	0.00
9,700.00	90.00	5.20	6,340.00	3,295.85	1,095.43	3,446.14	0.00	0.00	0.00
9,800.00	90.00	5.20	6,340.00	3,395.44	1,104.50	3,545.59	0.00	0.00	0.00
9,900.00	90.00	5.20	6,340.00	3,495.03	1,113.57	3,645.04	0.00	0.00	0.00
10,000.00	90.00	5.20	6,340.00	3,594.62	1,122.64	3,744.48	0.00	0.00	0.00
10,100.00	90.00	5.20	6,340.00	3,694.20	1,131.71	3,843.93	0.00	0.00	0.00
10,200.00	90.00	5.20	6,340.00	3,793.79	1,140.77	3,943.37	0.00	0.00	0.00
10,300.00	90.00	5.20	6,340.00	3,893.38	1,149.84	4,042.82	0.00	0.00	0.00
10,400.00	90.00	5.20	6,340.00	3,992.97	1,158.91	4,142.26	0.00	0.00	0.00
10,500.00	90.00	5.20	6,340.00	4,092.56	1,167.98	4,241.71	0.00	0.00	0.00
10,600.00	90.00	5.20	6,340.00	4,192.14	1,177.05	4,341.16	0.00	0.00	0.00
10,700.00	90.00	5.20	6,340.00	4,291.73	1,186.12	4,440.60	0.00	0.00	0.00
10,800.00	90.00	5.20	6,340.00	4,391.32	1,195.18	4,540.05	0.00	0.00	0.00
10,900.00	90.00	5.20	6,340.00	4,490.91	1,204.25	4,639.49	0.00	0.00	0.00
11,000.00	90.00	5.20	6,340.00	4,590.50	1,213.32	4,738.94	0.00	0.00	0.00
11,100.00	90.00	5.20	6,340.00	4,690.08	1,222.39	4,838.38	0.00	0.00	0.00
11,200.00	90.00	5.20	6,340.00	4,789.67	1,231.46	4,937.83	0.00	0.00	0.00
11,300.00	90.00	5.20	6,340.00	4,889.26	1,240.52	5,037.28	0.00	0.00	0.00
11,400.00	90.00	5.20	6,340.00	4,988.85	1,249.59	5,136.72	0.00	0.00	0.00
11,500.00	90.00	5.20	6,340.00	5,088.44	1,258.66	5,236.17	0.00	0.00	0.00
11,600.00	90.00	5.20	6,340.00	5,188.02	1,267.73	5,335.61	0.00	0.00	0.00
11,700.00	90.00	5.20	6,340.00	5,287.61	1,276.80	5,435.06	0.00	0.00	0.00
11,800.00	90.00	5.20	6,340.00	5,387.20	1,285.87	5,534.50	0.00	0.00	0.00
11,900.00	90.00	5.20	6,340.00	5,486.79	1,294.93	5,633.95	0.00	0.00	0.00
12,000.00	90.00	5.20	6,340.00	5,586.38	1,304.00	5,733.40	0.00	0.00	0.00
12,100.00	90.00	5.20	6,340.00	5,685.96	1,313.07	5,832.84	0.00	0.00	0.00
12,200.00	90.00	5.20	6,340.00	5,785.55	1,322.14	5,932.29	0.00	0.00	0.00
12,300.00	90.00	5.20	6,340.00	5,885.14	1,331.21	6,031.73	0.00	0.00	0.00
12,400.00	90.00	5.20	6,340.00	5,984.73	1,340.28	6,131.18	0.00	0.00	0.00
12,500.00	90.00	5.20	6,340.00	6,084.32	1,349.34	6,230.62	0.00	0.00	0.00
12,600.00	90.00	5.20	6,340.00	6,183.90	1,358.41	6,330.07	0.00	0.00	0.00
12,700.00	90.00	5.20	6,340.00	6,283.49	1,367.48	6,429.52	0.00	0.00	0.00
12,800.00	90.00	5.20	6,340.00	6,383.08	1,376.55	6,528.96	0.00	0.00	0.00
12,900.00	90.00	5.20	6,340.00	6,482.67	1,385.62	6,628.41	0.00	0.00	0.00
13,000.00	90.00	5.20	6,340.00	6,582.26	1,394.69	6,727.85	0.00	0.00	0.00
13,100.00	90.00	5.20	6,340.00	6,681.84	1,403.75	6,827.30	0.00	0.00	0.00
13,200.00	90.00	5.20	6,340.00	6,781.43	1,412.82	6,926.74	0.00	0.00	0.00
13,300.00	90.00	5.20	6,340.00	6,881.02	1,421.89	7,026.19	0.00	0.00	0.00
13,400.00	90.00	5.20	6,340.00	6,980.61	1,430.96	7,125.64	0.00	0.00	0.00
13,500.00	90.00	5.20	6,340.00	7,080.20	1,440.03	7,225.08	0.00	0.00	0.00
13,600.00	90.00	5.20	6,340.00	7,179.78	1,449.09	7,324.53	0.00	0.00	0.00

Database:	Compass 5000 GCR epdm	**Local Co-ordinate Reference:**	Well Corral Canyon Federal 13H
Company:	XTO Energy Inc	**TVD Reference:**	Well @ 2935.00usft (Nabors 730)
Project:	Eddy County, NM (NAD 27)	**MD Reference:**	Well @ 2935.00usft (Nabors 730)
Site:	Corral Canyon Federal	**North Reference:**	Grid
Well:	Corral Canyon Federal 13H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB#1/Job#:		
Design:	Plan#1 103014		

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)
13,700.00	90.00	5.20	6,340.00	7,279.37	1,458.16	7,423.97	0.00	0.00	0.00
13,800.00	90.00	5.20	6,340.00	7,378.96	1,467.23	7,523.42	0.00	0.00	0.00
13,809.58	90.00	5.20	6,340.00	7,388.50	1,468.10	7,532.94	0.00	0.00	0.00
TD at 13809.58									

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
BHL Corral Canyon Fed - plan hits target center - Point	0.00	0.00	6,340.00	7,388.50	1,468.10	426,707.60	599,554.00	32° 10' 21.81716 N	104° 0' 41.69524 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
246.00	246.00	Rustler		0.00	11.24
657.00	657.00	Top Salt		0.00	11.24
2,550.00	2,550.00	Base Salt		0.00	11.24
2,806.00	2,806.00	Delaware		0.00	11.24
3,669.00	3,669.00	Cherry Canyon		0.00	11.24
5,242.00	5,242.00	Brushy Canyon		0.00	11.24
6,551.83	6,228.00	Basal Brushy Canyon		0.00	11.24
6,816.50	6,313.00	Brushy Canyon "E3"		0.00	11.24

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
5,428.97	5,428.97	0.00	0.00	KOP, Start 8.00°/100' Build
6,178.97	6,049.22	110.66	340.57	Hold 60° Inc. for 180'
6,358.97	6,139.22	158.83	488.83	Start 10.00°/100' Build
7,059.47	6,340.00	666.20	855.98	LP, Hold 90.00° Inc
13,809.58	6,340.00	7,388.50	1,468.10	TD at 13809.58

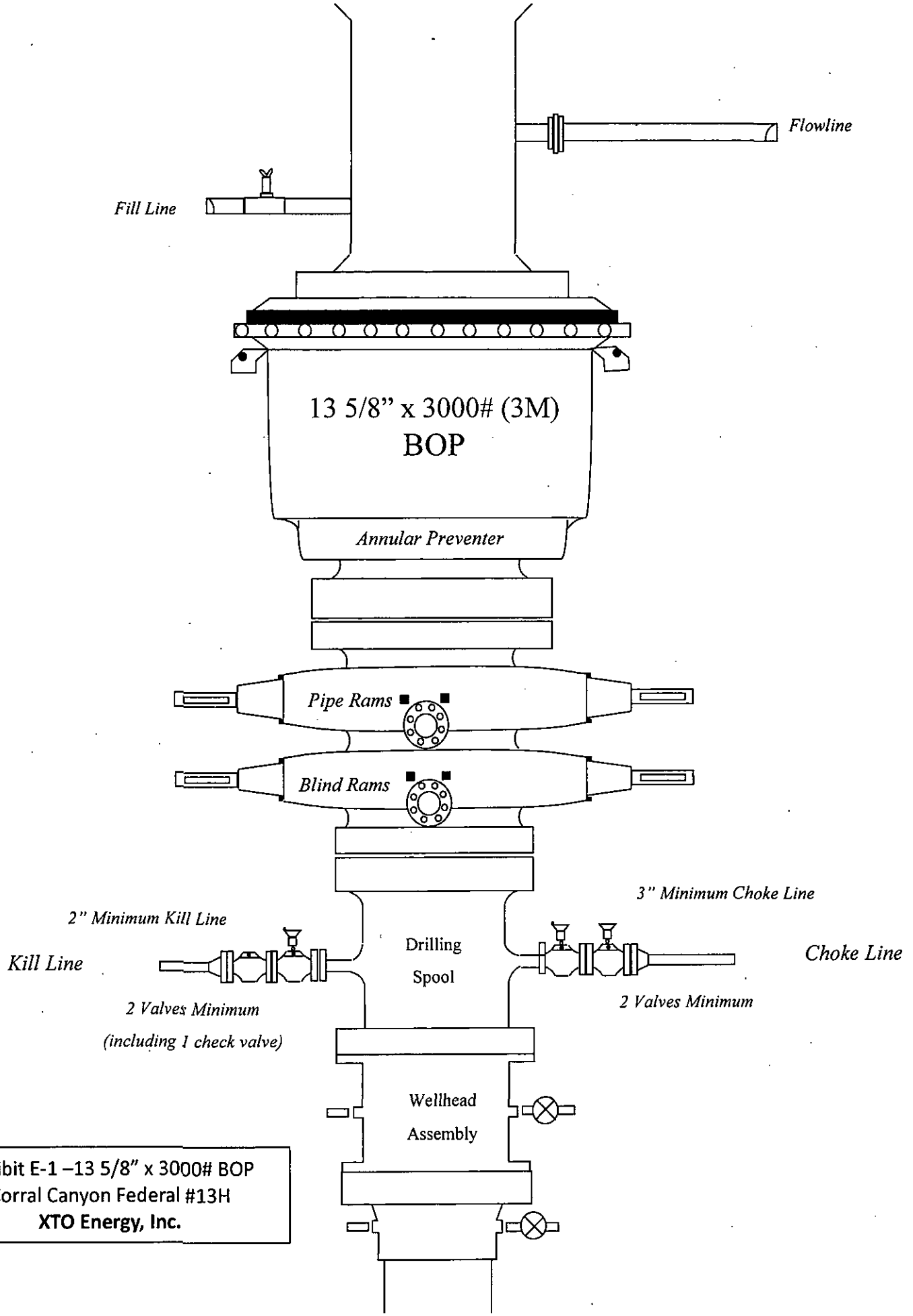
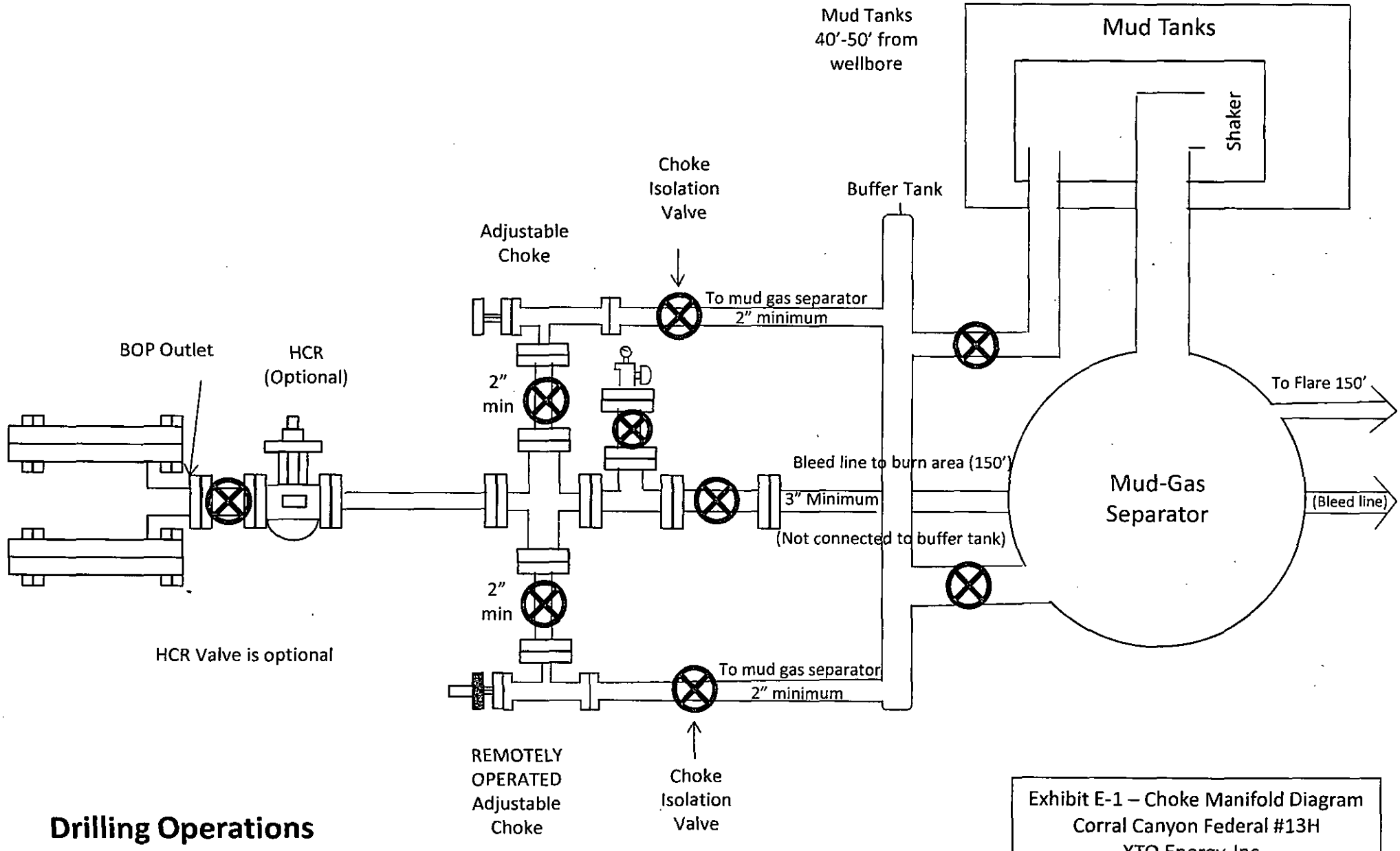
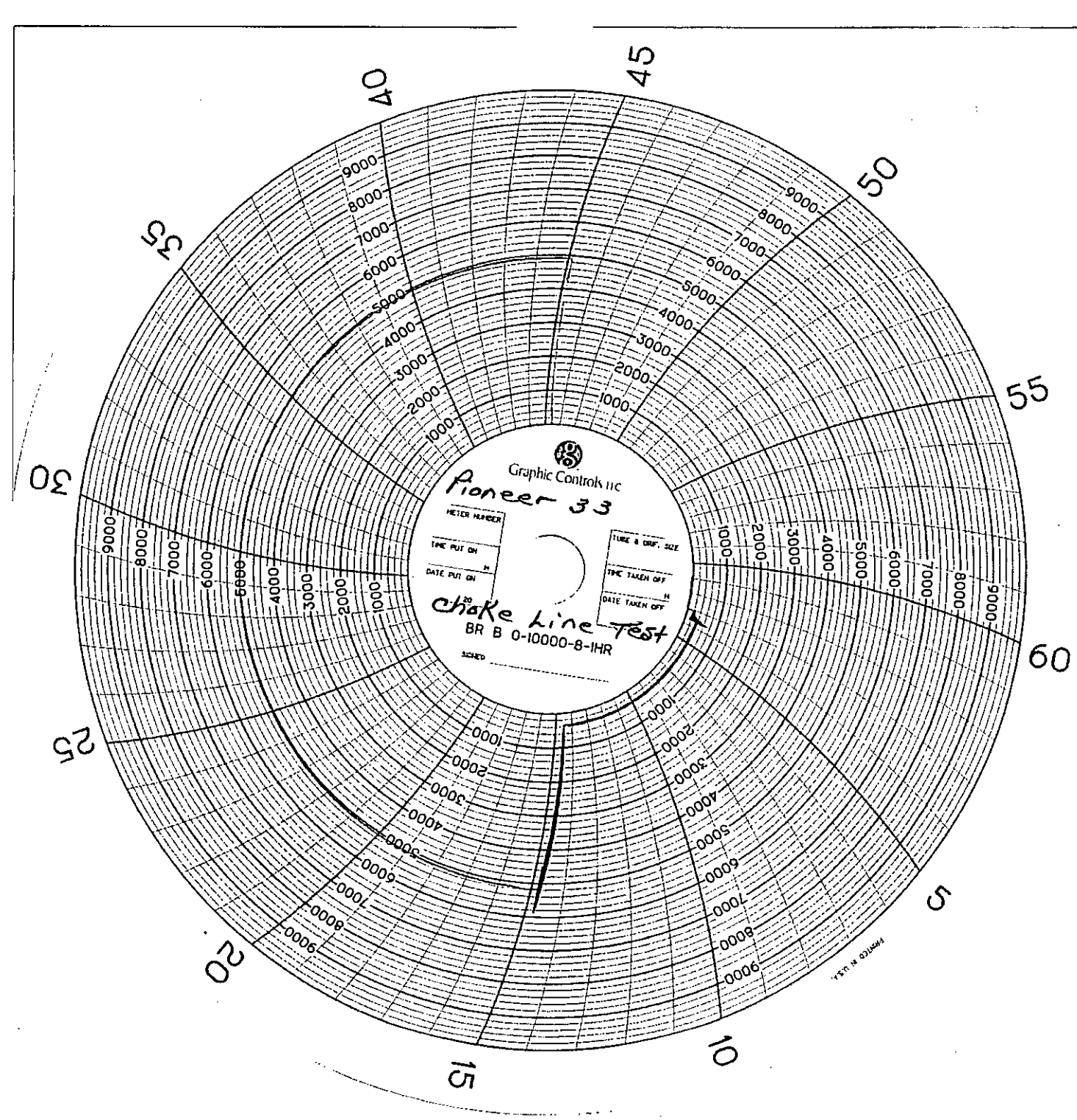


Exhibit E-1 –13 5/8" x 3000# BOP
Corral Canyon Federal #13H
XTO Energy, Inc.



Drilling Operations
Choke Manifold

Exhibit E-1 – Choke Manifold Diagram
Corral Canyon Federal #13H
XTO Energy, Inc..


Graphic Controls LLC
Pioneer 33
METER NUMBER
TIME PUT ON
DATE PUT ON
TUBE & DIFF. SIZE
TIME TAKEN OFF
DATE TAKEN OFF
Choke Line Test
BR B 0-10000-8-1HR
SIGNED
40
45
50
55
60
5
10
15
20
25
30
35

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

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE D PRESSURE TEST CERTIFICATE

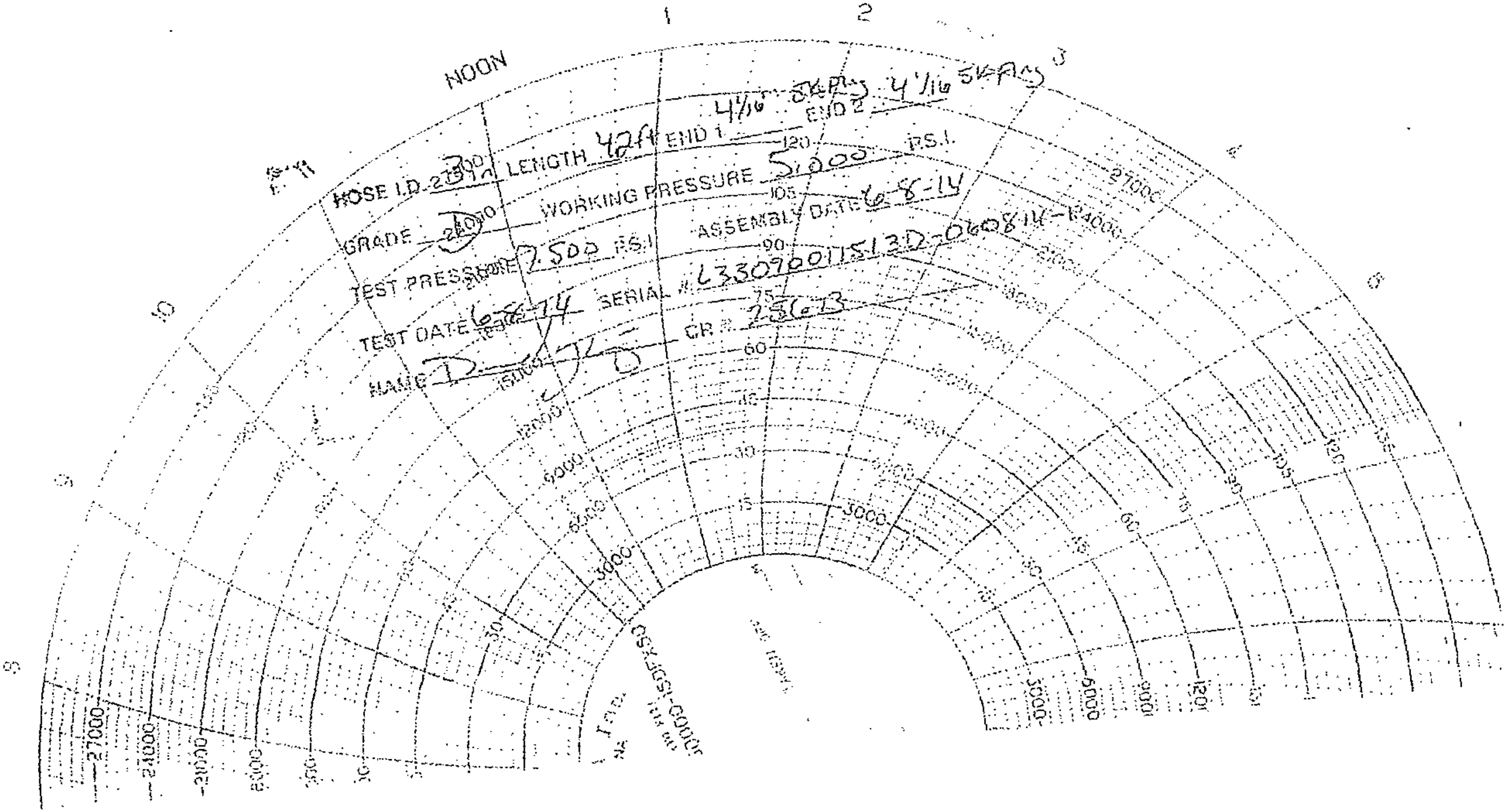
Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-060814-1
Invoice No. :	201709	Created By:	NORMA

Product Description:	FD3.042.0R4L/16.5KFLGE/E LE

End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 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 7,500 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:	QUALITY	Technical Supervisor :	PRODUCTION
Date :	6/8/2014	Date :	6/8/2014
Signature :		Signature :	


NOON
HOSE I.D.
LENGTH 42ft
END 1
END 2
WORKING PRESSURE 5,000 P.S.I.
GRADE
ASSEMBLY DATE 6-8-14
TEST PRESSURE 7,500 P.S.I.
SERIAL #
TEST DATE 6-8-14
CR # 25613
NAME

XTO ENERGY

April 14, 2015

Stephanie Rabadue
XTO Energy Inc.
500 W. Illinois St Ste 100
Midland, TX 79701
432-620-6714
stephanie_rabadue@xtoenergy.com

Bureau of Land Management
620 E. Greene
Carlsbad, NM 88220
575-887-6544

Dear Sirs:

XTO Energy Inc. does not anticipate encountering H2S while drilling the Corral Canyon Federal #14H located in Section 5, T25S, R29E, in Eddy County, New Mexico. As a precaution, I have attached an H2S contingency plan along with a gas analysis of our well stream. If you need anything further, please contact me at the telephone number or email listed above.

Thank you,

Stephanie Rabadue

Stephanie Rabadue
Regulatory Analyst

HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H_2S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - Detection of H_2S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

XTO Energy Inc's personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

EUNICE OFFICE – EDDY & LEA COUNTIES

EMSU @ Oil Center, NM, 8/10ths mile west of Hwy 8 on Hwy 175
Eunice, NM 575-394-2089

XTO ENERGY INC PERSONNEL:

Boogie Armes, Sr. Drilling Superintendent	432-556-7403
Bob Chance, Drilling Superintendent	432-296-3926
Jeff Raines, Construction Foreman	432-557-3159
Dudley McMinn, EH & S Manager	432-557-7976
Rick Wilson, Production Foreman	575-441-1147

SHERIFF DEPARTMENTS:

Eddy County	575-887-7551
Lea County	575-396-3611

NEW MEXICO STATE POLICE: 575-392-5588

FIRE DEPARTMENTS:

	911
Carlsbad	575-885-2111
Eunice	575-394-2111
Hobbs	575-397-9308
Jal	575-395-2221
Lovington	575-396-2359

HOSPITALS:

	911
Carlsbad Medical Emergency	575-885-2111
Eunice Medical Emergency	575-394-2112
Hobbs Medical Emergency	575-397-9308
Jal Medical Emergency	575-395-2221
Lovington Medical Emergency	575-396-2359

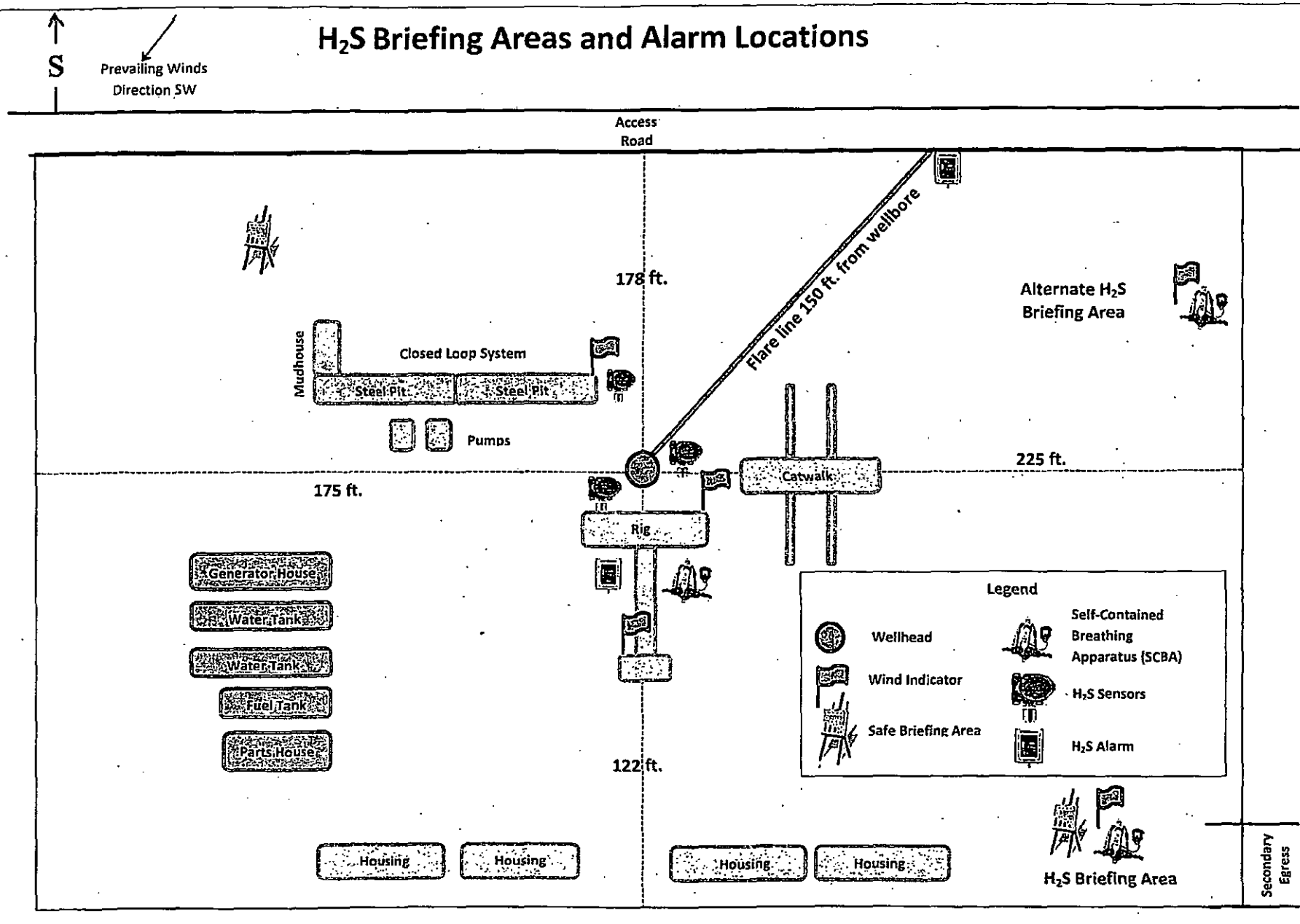
AGENT NOTIFICATIONS:

Bureau of Land Management	575-393-3612
New Mexico Oil Conservation Division	575-393-6161
Mosaic Potash - Carlsbad	575-887-2871

CONTRACTORS:

ABC Rental – Light Towers	575-394-3155
Bulldog Services – Trucking/Forklift	575-391-8543
Champion – Chemical	575-393-7726
Indian Fire & Safety	575-393-3093
Key – Dirt Contractor	575-393-3180
Key Tools – Light Towers	575-393-2415
Sweatt – Dirt Contractor	575-397-4541
RWI – Contract Gang	575-393-5305

H_2S Briefing Areas and Alarm Locations



Corral Canyon Oil and Gas Exploration Project

Master Surface Use Plan

Eddy County, New Mexico

XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, TX 79701

Original: July 2014
Revised: August 2014 (typographical errors, per J. Rice)

Corral Canyon Oil and Gas Exploration Project
Master Surface Use Plan

Introduction

The following Exhibits are attached to this Surface Use Plan of Operations (SUPO):

Exhibit "A" Project Map
Displays: Existing roads, proposed roads, proposed well pads, proposed facility location, proposed flowline route, proposed gas pipeline route, proposed salt water disposal flowline route, proposed electrical route
- A.1 Legend & Distance Summary

Exhibit "B" Proposed Well List (includes v-door orientation)

Exhibit "C" One-Mile Radius Maps
- C.1 Section 6
- C.2 Section 5
- C.3 Section 4
- C.4 Section 3

Exhibit "D" Production Facilities
- D.1 Facilities Plat
- D.2 Facilities Diagram
- D.3 Salt Water Disposal Permit
- D.4 Facilities Berm Diagram

Exhibit "E" New Mexico Office of the State Engineer Water Documents

Exhibit "F" Rig Layout Diagrams
- F.1 V-Door East
- F.2 V-Door West

Exhibit "G" 600'x600' Well Maps (24 Total)

Exhibit "H" Interim Reclamation Diagrams
- H.1 Corral Canyon #1H/#13H
- H.2 Corral Canyon #2H/#14H
- H.3 Corral Canyon #3H/#15H
- H.4 Corral Canyon #4H/#16H
- H.5 Corral Canyon #5H/#17H
- H.6 Corral Canyon #6H/#18H
- H.7 Corral Canyon #7H/#19H
- H.8 Corral Canyon #8H/#20H
- H.9 Corral Canyon #9H/#21H
- H.10 Corral Canyon #10H/#22H
- H.11 Corral Canyon #11H/#23H
- H.12 Corral Canyon #12H/#24H

XTO Energy, Incorporated (XTO Energy) proposes to conduct an oil and gas exploratory drilling program in the Rustler Bluff/Corral Draw, North project area which includes drilling, completion and abandonment of a maximum of 24 wells with a centralized tank battery on Bureau of Land Management (BLM) administered lands located 6.7 miles Southeast of Malaga in Eddy County, New Mexico. XTO Energy has identified and staked 12 dual-well pad locations and 1 Central Tank Battery pad with BLM representatives present.

One drilling rig and one completion team will be required throughout the duration of the project.

Well Site Locations

The results of the Corral Canyon Exploration Program will determine whether economic quantities of oil and gas can be produced in the Corral Canyon area with two primary formations targeted. Fewer wells may be drilled during exploration than are proposed due to well test results and geologic and market uncertainties. Well locations will be determined based on cross-section variations and details. Locations will be selected to minimize the likelihood of encountering faults and/or drilling hazards while still targeting suitably productive zones.

If drilling results in an unproductive well, the well will be plugged and abandoned as soon as practical after the conclusion of production testing. Productive wells may be shut-in temporarily for BLM authorization for production activities and facilities.

Surface Use Plan

1. **Existing Roads**
   A. The Corral Canyon area is accessed by existing U.S. Highway 285 (Pecos Hwy.) and County Road 725 (Longhorn Road). Going Northeast on Co. Rd. 725 approximately 4.2 miles, across the Pecos River and unnamed State and BLM roads adjacent to and within the project area. A Transportation Plan identifying existing roads that will be used to access the project area is included in Exhibit "A".
   B. There is 16,168' of existing roads in the Corral Canyon lease area. Existing roads will be maintained in as good or better condition as they existed prior to commencement of the exploration program. All equipment and vehicles will be confined to the routes shown in Exhibit "A". Maintenance of the access roads will continue until abandonment and reclamation of the well pads is completed.

2. **New or Upgraded Access Roads**
   A. **New Roads.** There is a total of 6,233' of proposed and staked access roads in the Corral Canyon lease area.
   B. **Well Pads.** The well pads selected for development will determine which existing roads will be upgraded and which new roads will be built. The Project Map (Exhibit "A") shows the locations of existing and proposed roads that will need to be upgraded or constructed to access the well pads.
   C. **Anticipated Traffic.** After well completion, travel to each well site will included one lease operator truck and two oil trucks per day until the Central Tank Battery is completed. Upon completion of the Central Tank Battery, one lease operator truck will continue to travel to each well site to monitor the working order of the wells and to check well equipment for proper operation. Two oil trucks will continue to travel to the Central Tank Battery only for oil hauling. Additional traffic will include one maintenance truck periodically throughout the year for pad upkeep and weed removal. Well service trips will include only the traffic necessary to work on the wells or provide chemical treatments periodically and as needed throughout the year.
   D. **Routing.** All equipment and vehicles will be confined to the travel routes laid out in Exhibit "A" unless otherwise approved by the BLM and applied for by XTO Energy.
   E. **Road Dimensions.** The maximum width of the driving surface of new roads will be 14 feet. The roads will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.

Level Ground Section

F. **Surface Material.** Surface material will be native caliche. The average grade of all roads will be approximately 3%.
G. **Fence Cuts:** No.
H. **Fences:**
    a. *Corral Canyon Federal #3H/#15H:* A 3-strand fence will be constructed around the Southeast corner extending 60' North and 60' West to keep people and traffic from encroaching on a water run-off as agreed upon during the well staking dated 3/4/2014.
    b. *Corral Canyon Federal #6H/#18H:* A 3-strand fence will be constructed around the Southwest corner extending 60' North and 60' east to keep people and traffic from encroaching on a water run-off as agreed upon during the well staking dated 4/1/2014.
I. **Cattle Guards:** No
J. **Turnouts:** No
K. **Culverts:** A minimum of 1 culvert will be installed every 240' on the proposed lease road from the #9H/#21H well (#9H/#21H location: 170 FSL & 85 FWL, Section 3-T25S-R29E) to the #10H/#22H (#10H/#22H location: 500 FNL & 2410 FEL, Section 10-T25S-R29E) well pad. Appropriate plat diagrams and Right-of-Ways (SF-299) will be filed if the exploration project continues to this point.
L. **Cuts and Fills:** Not significant
M. **Topsoil.** Approximately 6 inches of topsoil (root zone) will be stripped from the proposed access road prior to any further construction activity. The topsoil that was stripped will be spread along the edge of the road and within the ditch. The topsoil will be seeded with the proper seed mix designated by the BLM.
N. **Maintenance.** The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along with access road route.
O. **Drainage.** The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

3. Location of Proposed Wells

A. All proposed wells will be on the proposed pads shown on Exhibit "A" and are listed in Exhibit "B".

4. Location of Existing Wells

A. See Exhibit "C" Figures C.1, C.2, C.3, C.4" displaying wells within a one-mile radius of all well locations.

5. Location of Proposed Production Facilities

A. **Ancillary Facilities.** No off-pad ancillary facilities are planned during the exploration phase including, but not limited to: campsites, airstrips or staging areas.
B. **Production Facilities.** A separate 250' x 400' pad was staked with the BLM for construction and use as a Central Tank Battery (Corral Canyon Central Tank Battery). This pad is located in the SE/4 of Section 5-T25S-R29E of Eddy County, New Mexico [See Exhibit "D"] directly adjacent to the Corral Canyon Federal #4H & #16H dual well pad.
C. **Facility Equipment.** In the event that all 24 wells are drilled, the facility pad is expected to contain: 8-1000bbl oil tanks, 8-1000bbl water tanks, 2-LACT meters, 1-flare scrubber, 1-gas scrubber, 1-compressor pad, 1-dehy pad and 2-heater treaters as well as additional equipment as depicted on Exhibit "D" D.2. This equipment list and the development of these facilities are variable and subject to the number of wells drilled, production results based on well tests and geologic and market uncertainties. In the event that the planned 24 wells are not drilled, excess facility pad will be

reduced in size and reclaimed with prior submission of appropriate 3160-5 sundry notices to the Bureau of Land Management.

D. **Oil Flowlines.** In the event the wells are found productive, 4" composite spoolable HDE poly pipe flowlines with a maximum pressure rating of 125psi (anticipated pressure: 80psi) will be laid on the surface within existing and proposed lease road corridors from the well to the Corral Canyon Central Tank Battery (SE/4 Section 5) [See Exhibit "A" for flowline route & Exhibit "D" Figure D.1 for facility location.] where the oil, gas and water will be metered and appropriately separated. Oil will be hauled from the location by truck following existing and proposed lease roads. The total distance of proposed oil flowline is: 22,401' (4.24mi) following existing and proposed lease road surface corridors.

E. **Gas Pipeline.** A gas pipeline is anticipated to be staked and installed along 7949' of existing roads in the area within lease road corridors. All compressor and dehydration facilities for gas sales purchasing will be located on XTO Energy, Incorporated's Corral Canyon Tank Battery facility pad as depicted on Exhibit "D" D.2.

F. **Disposal Facilities.** All disposal lines will be 4" composite spoolable poly pipe flowlines with a maximum pressure rating of 125psi and will lay on the surface following 7949' of existing and proposed lease road corridors from the proposed Corral Canyon Central Tank Battery located in the SE/4 Section 5-T25S-R29E to the existing Goldenchild 6 State SWD #1, API #: 30-015-41846, NMOCD Order: SWD-1458, located 800 FSL & 330 FEL, Unit P-Section 6-T25S-R29E. A copy of the Goldenchild 6 State SWD #1 C-102 and NMOCD approved SWD permit is included (see Exhibit "D" Figure D.3).

G. **Flare.** The flare stack will be 50'x50', located at the Southeastern corner of the Corral Canyon Federal #4/#16 well pad (see Exhibit "H" F.4) and will be sized for 10 to 15mmscf/d. The flare will be built only after the Corral Canyon Federal #4/#16 wells are drilled and completed.

H. **Aboveground Structures.** All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted earth-tone colors such as 'desert tan' that reduce the visual impacts of the built environment.

I. **Containment Berms.** Containment berms will be constructed completely around any production facilities designed to hold fluids. The containment berms will be constructed of compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas.

J. **Electrical.** All electrical poles and lines will be placed within existing and proposed lease roads corridors. The electrical provider is anticipated to be Excel Energy. All powerlines will be tied into the Goldenchild lease located in Section 6-T25S-R29E (surface owner: New Mexico State Lands), directly adjacent to the Corral Canyon project area (see Exhibit "A"). All electrical lines will be primary 12,740 volt to properly run expected production equipment. Provided that all 24 wells are developed, no more than 5.5 miles of electrical lines will be run. This distance is a maximum approximation and may vary based on the lease road corridors, varying elevations and terrain in the area.

6. **Location and Types of Water Supply**

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from commercial water stations in the area and hauled to the location by transport truck using the existing and proposed roads depicted in the attached exhibits. No water well will be drilled on the location.

Water for drilling, completion and dust control will be purchased from the following company:

SB Oilfield Services
213 S. Mesa
Carlsbad, NM 88220

Water for drilling, completion and dust control will be supplied to SB Oilfield Services for sale to XTO Energy, Inc from the following two sources (see Exhibit "E"):

1st Well: C3423
Section 26-T24S-R28E, SW/NE quarter
Latitude: 32 degrees, 11 minutes, 26.2 seconds
Longitude: 104 degrees, 03 minutes, 29.1 seconds

2nd Well: C3358
Section 26-T24S-R28E, SE/NW quarter
Latitude: 32 degrees, 11 minutes, 31.58 seconds
Longitude: 104 degrees, 03 minutes, 43.11 seconds

Anticipated water usage for drilling includes an estimated 30,000 barrels of water to drill a horizontal well in a combination of fresh water and brine as detailed in the mud program in the drilling plans. These volumes are calculated for ~1.5bbls per foot of hole drilled with 40% excess to accommodate any lost circulation or wash out that may occur. Actual water volumes used during operations will depend on the depth of the well, length of horizontal sections, and the losses that may occur during the operation.

Well completion is expected to require approximately 50,000 barrels of fresh water per horizontal well. Actual water volumes used during operations will depend on the depth of the well and length of horizontal sections. After production is established, XTO may complete wells with approximately 50,000 barrels of produced water. If this decision is made, the BLM will be notified appropriately, proper permitting will ensue with the New Mexico Oil Conservation division and this surface use plan will be amended as needed.

A fresh water frac pond is anticipated after the wells are drilled. The maximum size anticipated for 24 wells is 250'x250'x15' with a HDPE 30mil liner. The potential location of the frac pond is unknown at this time but will be staked with a BLM representative present in order to make certain all wildlife habitat and hydrological areas are protected with minimal environmental impact.

7. **Construction Activities**

A. Construction, reclamation, and/or routine maintenance will not be conducted during periods when the soil conditions for construction could lead to impacts to the surrounding environment, or when watershed damage is likely to occur as a result of these activities.

B. Any construction material that may be required for surfacing of the drill pad and access road will be from a contractor having a permitted source of materials within the general area. No construction materials will be removed from federal lands without prior approval from the appropriate surface management agency. All roads and well pads will be constructed of 6" rolled and compacted caliche.

8. **Methods for Handling Waste**
   - **Cuttings**. The well will be drilled utilizing a closed-loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site.
   - **Drilling Fluids**. These will be contained in steel mud pits and then taken to a NMOCD approved commercial disposal facility.
   - **Produced Fluids**. Water produced from the well during completion will be held temporarily in steel tanks and then taken to a NMOCD approved commercial disposal facility. Oil produced during operations will be stored in tanks until sold.
   - **Sewage**. Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completion activities, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to the disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
   - **Garbage and Other Waste Materials.** All garbage, junk and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage, to prevent scattering and will be removed and deposited in an approve sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.
   - **Debris**. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash cage will be cleaned and removed from the well location. No potential adverse materials or substances will be left on location.
   - **Hazardous Materials.**
     i. All drilling wastes identified as hazardous substances by the Comprehensive Environmental Response Compensation Liability Act (CERCLA) removed from the location and not reused at another drilling location will be disposed of at a hazardous waste facility approved by the U.S. Environmental Protection Agency (EPA).
     ii. XTO Energy, Incorporated and its contractors will comply with all applicable Federal, State and local laws and regulations, existing or hereafter enacted promulgated, with regard to any hazardous material, as defined in this paragraph, that will be used, produced, transported or stored on the oil and gas lease. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the CERCLA of 1980, as amended, 42 U.S.C 9601 et seq., and its regulation. The definition of hazardous substances under CERLCA includes any 'hazardous waste" as defined in the RCRA of 1976, as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous material also includes any nuclear or nuclear by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.C.S. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101 (14) U.S.C. 9601 (14) nor does the term include natural gas.
     iii. No hazardous substances or wastes will be stored on the location after completion of the well.
     iv. Chemicals brought to location will be on the Toxic Substance Control Act (TSCA) approved inventory list.
     v. All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in Notice to Lessees (NTL) 3A will be reported to the BLM Carlsbad Field Office. Major events will be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days.

9. **Well Site Layout**
   A. **Rig Plat Diagrams**: A drawing of a typical dual-drilling pad is shown in figures F.1 and F.2 in Exhibit "F". A typical drilling pad will be 430 feet by 300 feet. This will allow enough space for cuts and fills, topsoil storage, and storm water control.

B. **Closed-Loop System:** There will be no reserve pit as each well will be drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17.
C. **V-Door Orientation:** V-door orientation will vary from well-to-well due to the surface conditions and agreed upon standards with Jesse Rice, BLM Natural Resource Specialist, present at on-site inspections. For individual well v-door orientations, see Exhibit "B" and Exhibit "F".
D. A 600' x 600' area has been staked and flagged around each well pad. (Exhibit "G").
E. All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad and topsoil storage areas).

10. Plans for Surface Reclamation

Non-Commercial Well (Not Productive), Interim & Final Reclamation:

Definition: Reclamation includes disturbed areas where the original landform and a natural vegetative community will be restored and it is anticipated the site will not be disturbed for future development.

Reclamation Standards:

The portions of the pad not essential to production facilities or space required for workover operations will be reclaimed and seeded as per BLM requirements for interim reclamation. (See Exhibit "H" Figures H.1-12)

All equipment and trash will be removed, and the surfacing material will be removed from the well pad and road and transported to the original caliche pit or used to maintain other roads. The location will then be ripped and seeded.

The original stock piled topsoil will be spread over the areas being reclaimed and the original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors as close as possible to the original topography. The location will then be ripped and seeded

A self-sustaining, vigorous, diverse, native (or otherwise approved) plan community will be established on the site with a density sufficient to control erosion and invasion by non-native plants and to re-establish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.

Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gullying, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.

The site will be free of State-or County-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive and non-native weeds will be controlled.

Seeding:

- Seedbed Preparation: Initial seedbed preparation will consist of recontouring to the appropriate interim or final reclamation standard. All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4-6 inches. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.

- If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4-6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
- Seed Application. Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM to meet reclamation standards will be used.
- If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.

11. Surface Ownership

A. Within the Corral Canyon project area, 92% of the surface is under the administrative jurisdiction of the Bureau of Land Management and 8% of the surface is under the administrative jurisdiction of the New Mexico State Land Office. (See Exhibit "A").
B. The surface is multiple-use with the primary uses of the region for grazing and for the production of oil and gas.
C. The grazing lessee of note for this area is: W.P. Ranches Family Limited Partnership.

12. Other Information

Surveying

- **Well Sites.** Well pad locations have been staked. Surveys of the proposed access roads and well pad locations have been completed by John West Surveying, a registered professional land surveyor. Center stake surveys with access roads have been completed on State and Federal lands with Jesse Rice, Bureau of Land Management Natural Resource Specialist, in attendance.

- **Cultural Resources.** A Class III Cultural Resources Examination has been completed on all wells by Boone Archaeological Services and the results will be forwarded to the BLM Office. XTO has entered into the PA with the BLM on 2/18/2014 where all necessary applications and dues will be paid prior to any construction activities based on the extent of the project development.

- **Dwellings and Structures.** There are no dwellings or structures within 2 miles of this location.

Soils and Vegetation

- **Environmental Setting.** Soil area is a combination of Pajarito-Dune land complex, loamy sand with 0-3% slopes, and Potter-Simona complex, shallow sandy soil with 5 to 25% slopes. These soils support grassland dominated by black grama throughout with dropseeds and bluestems more prevalent in the loamier areas. The areas with shallower soil have fewer shrubs and more litter cover with shrubs such as sand sage, shinnery oak and mesquite appearing as the soil presents more loam. Other vegetation such as creosote, mesquite, catclaw, snakeweed, and soapweed yucca grow within the area.

- **Traffic.** No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along the access road route.

- **Water.** There is permanent or live water in the immediate area lying approximately 1-3 miles to the North/Northeast and West (Pecos River) variable to well pad location.

13. Bond Coverage

Bond Coverage is Nationwide. Bond Number: UTB000138

Operator's Representatives:

The XTO Energy, Incorporated representatives for ensuring compliance of the surface use plan are listed below:

Surface:

Stephanie Rabadue
Regulatory Analyst
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-620-6714
stephanie_rabadue@xtoenergy.com

Jeff Raines
Construction Superintendent
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-620-4349
jeff_raines@xtoenergy.com

Drilling:

Weston Turner
Drilling Engineer
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-620-4380
weston_turner@xtoenergy.com

Production:

David Luna
Production Engineer
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-620-6742
david_luna@xtoenergy.com

Facilities:

Gary Hoke
Facilities Engineer
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-620-4368
gary_hoke@xtoenergy.com

Exhibit A.1 Legend & Distance Summary

Line	Total Distance	Depicted By
Existing Roads	16,168'	Track Line
Proposed Roads	6,233'	Solid Black Line
Proposed Electrical & Pipeline	23,379'	Dashed Line
Proposed SWD & Anticipated Gas Route	7,949'	Yellow Highlighted Area

Corral Canyon Project Development

Exhibit "B" - List of Proposed Wells

XTO Energy, Incorporated

Well Name & Number	Footages	Section	Township	Range	Surface Owner	Elevation	V-Door
Corral Canyon Federal 1H	190 FSL & 470 FEL	6	25S	29E	State (Fed Minerals)	2912'	East
Corral Canyon Federal 2H	110 FSL & 1810 FWL	5	25S	29E	Federal	2941'	East
Corral Canyon Federal 3H	170 FSL & 2210 FEL	5	25S	29E	Federal	3004'	East
Corral Canyon Federal 4H	200 FSL & 760 FEL	5	25S	29E	Federal	2948'	West
Corral Canyon Federal 5H	180 FSL & 171 FWL	4	25S	29E	Federal	2945'	East
Corral Canyon Federal 6H	175 FNL & 1980 FWL	9	25S	29E	Federal	2947'	East
Corral Canyon Federal 7H	170 FSL & 1980 FEL	4	25S	29E	Federal	2976'	East
Corral Canyon Federal 8H	170 FSL & 610 FEL	4	25S	29E	Federal	2998'	West
Corral Canyon Federal 9H	170 FSL & 85 FWL	3	25S	29E	Federal	2998'	West
Corral Canyon Federal 10H	500 FNL & 2410 FWL	10	25S	29E	Federal	3032'	West
Corral Canyon Federal 11H	5 FNL & 2155 FEL	10	25S	29E	Federal	3024'	West
Corral Canyon Federal 12H	185 FNL & 835 FEL	10	25S	29E	Federal	3035'	East
Corral Canyon Federal 13H	190 FSL & 520 FEL	6	25S	29E	State (Fed Minerals)	2912'	East
Corral Canyon Federal 14H	120 FSL & 1760 FWL	5	25S	29E	Federal	2942'	East
Corral Canyon Federal 15H	170 FSL & 2260 FEL	5	25S	29E	Federal	3005'	East
Corral Canyon Federal 16H	200 FSL & 710 FEL	5	25S	29E	Federal	2947'	West
Corral Canyon Federal 17H	180 FSL & 221 FWL	4	25S	29E	Federal	2944'	East
Corral Canyon Federal 18H	175 FNL & 2030 FWL	9	25S	29E	Federal	2948'	East
Corral Canyon Federal 19H	170 FSL & 2030 FEL	4	25S	29E	Federal	2973'	East
Corral Canyon Federal 20H	170 FSL & 560 FEL	4	25S	29E	Federal	2998'	West
Corral Canyon Federal 21H	170 FSL & 35 FWL	3	25S	29E	Federal	2998'	West
Corral Canyon Federal 22H	500 FNL & 2460 FWL	10	25S	29E	Federal	3030'	West
Corral Canyon Federal 23H	5 FNL & 2205 FEL	10	25S	29E	Federal	3025'	West
Corral Canyon Federal 24H	185 FNL & 885 FEL	10	25S	29E	Federal	3035'	East

Exhibit "C" C.1 Section 6

One-Mile Radius Map

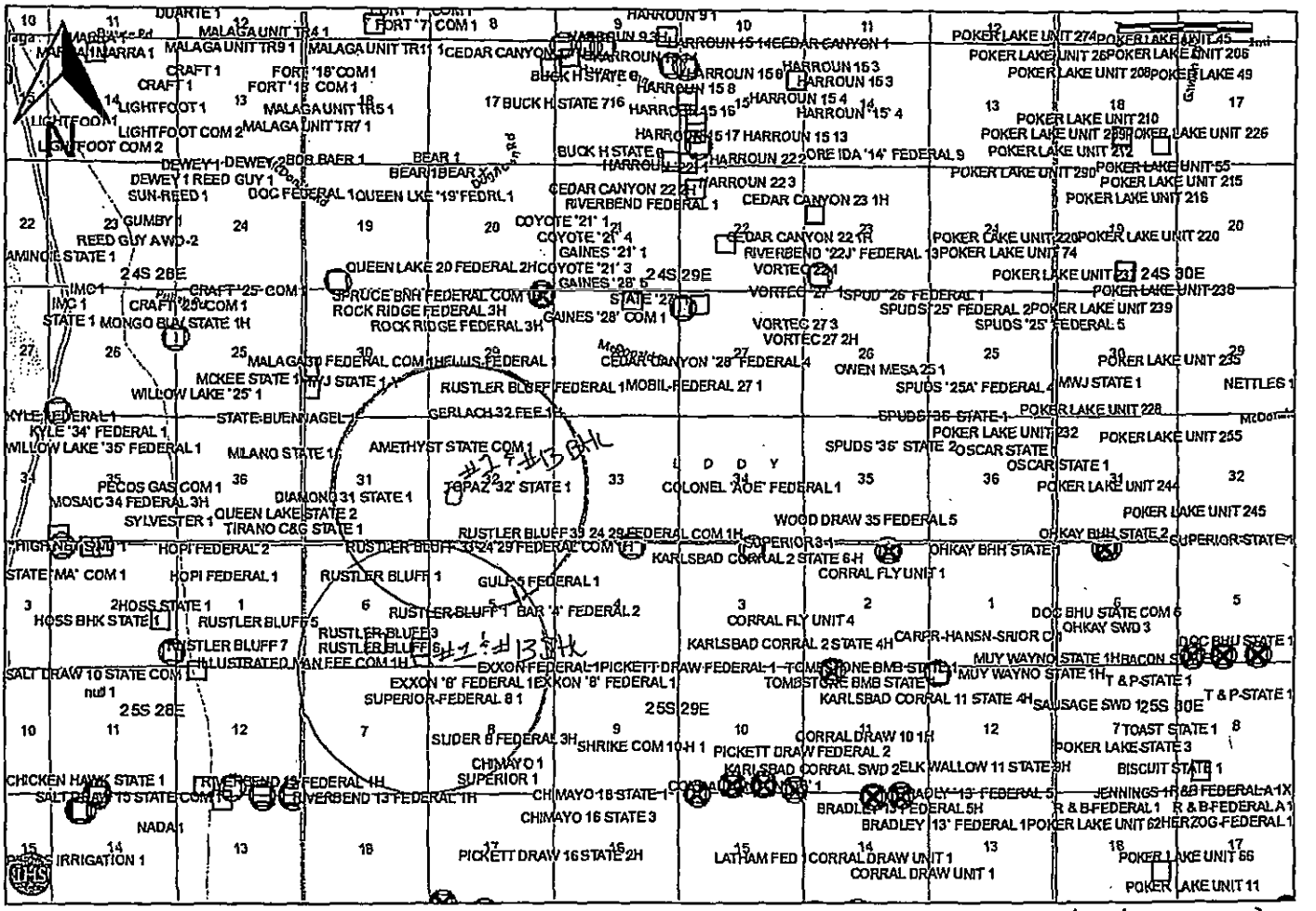


Exhibit "C" C.2 Section 5

One-Mile Radius Map

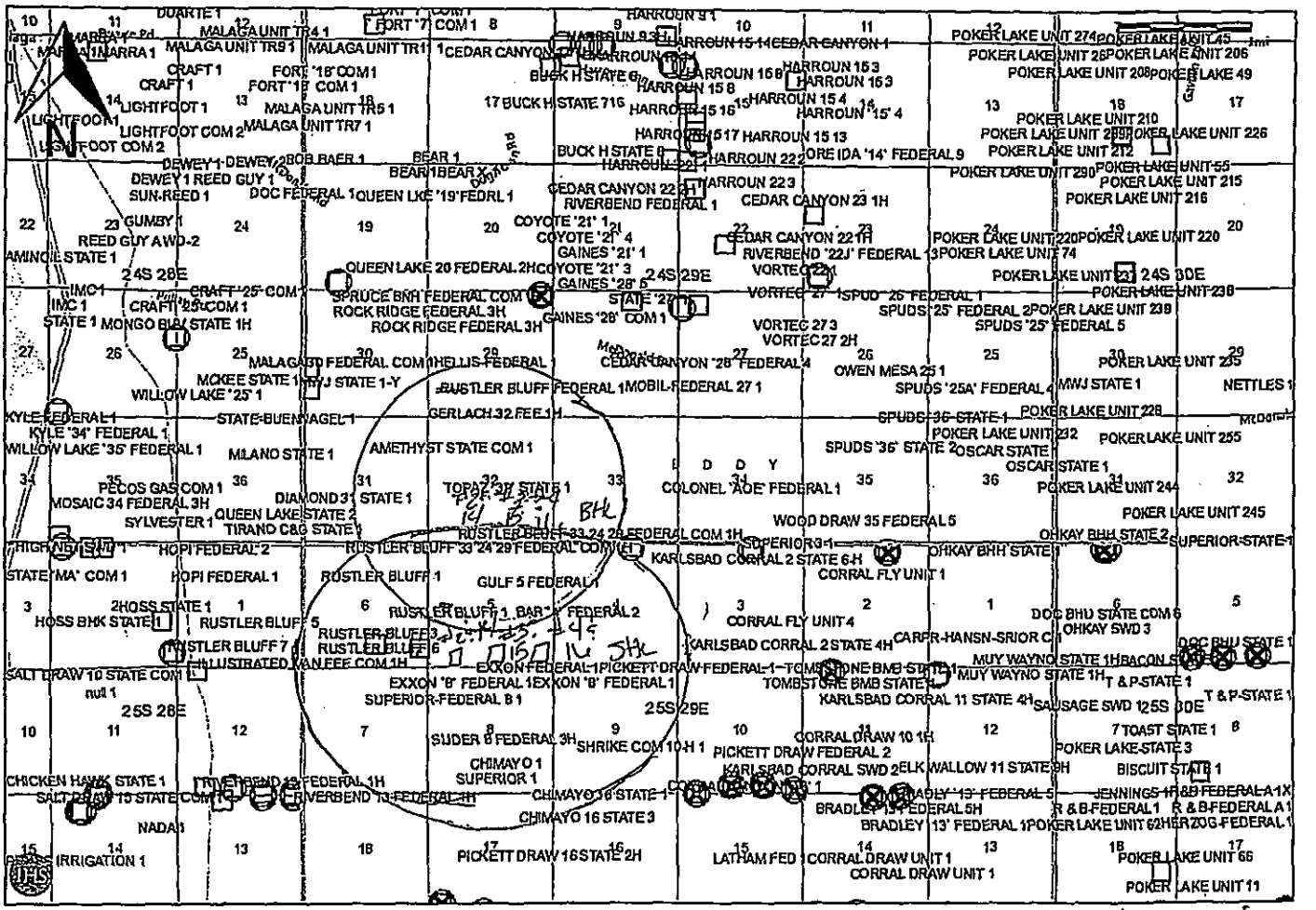
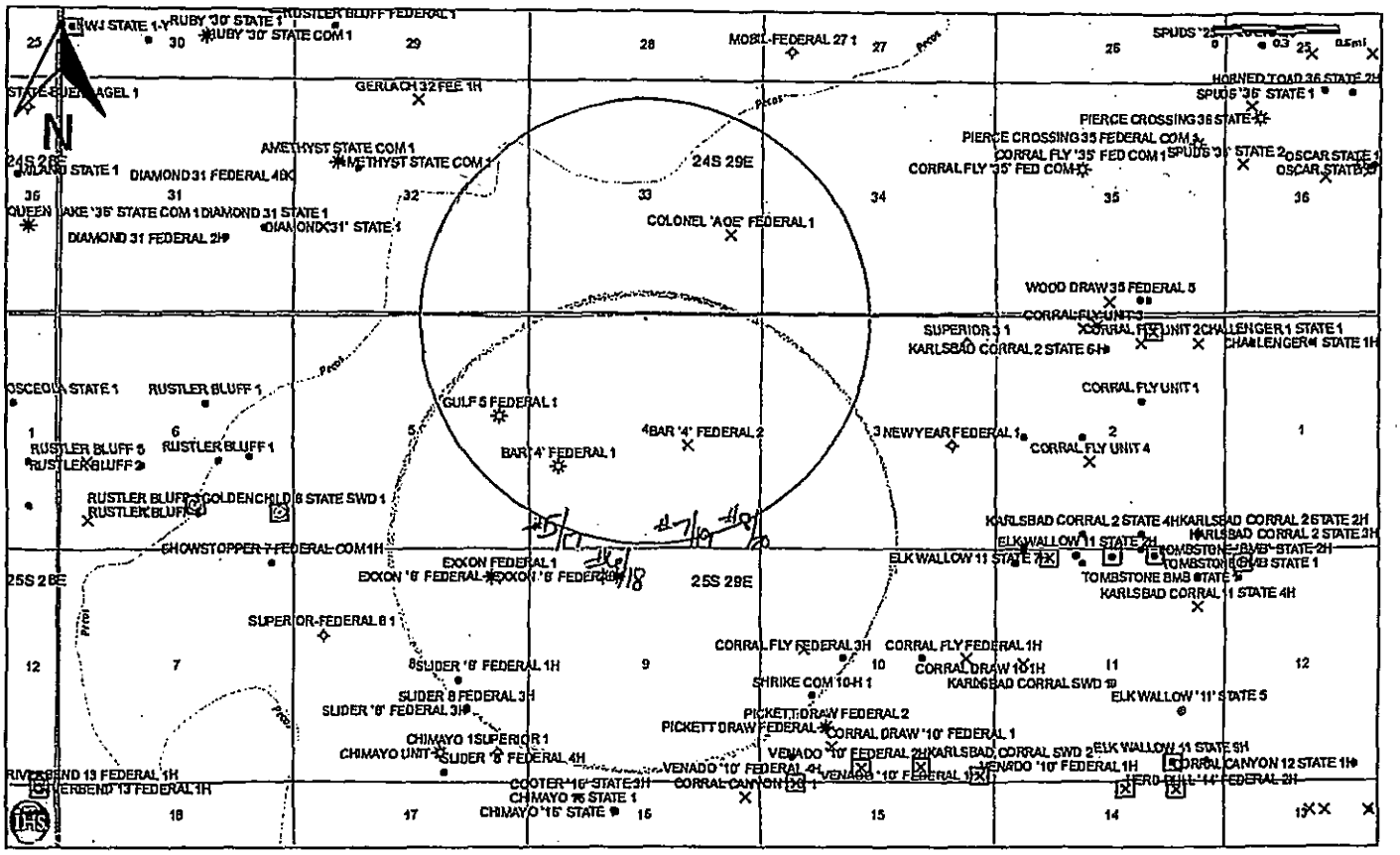


Exhibit "C" C.3 Section 4

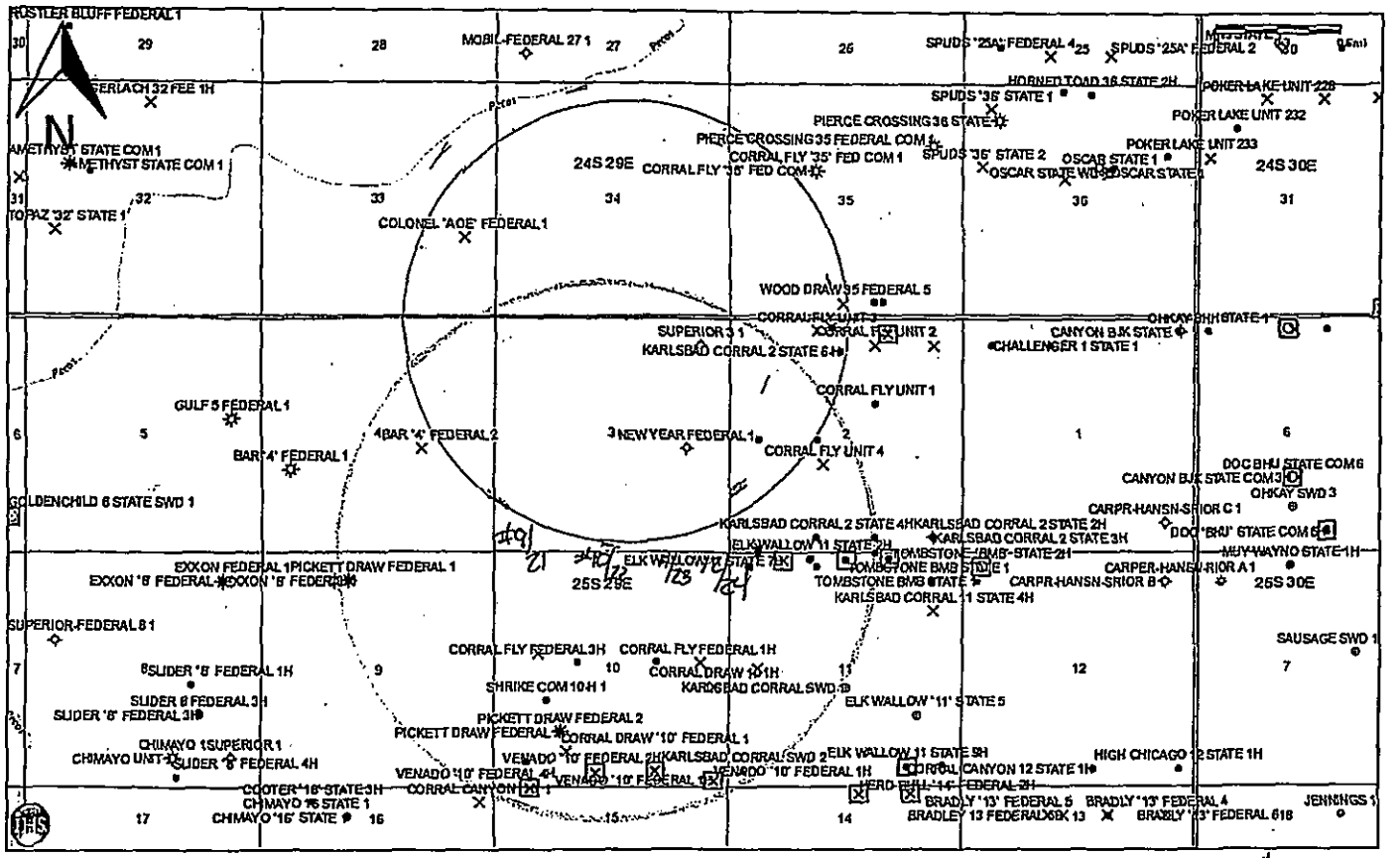
One-Mile Radius Map



1.25" = 1 mile

Exhibit "C" C.4 Section 3

One-Mile Radius Map

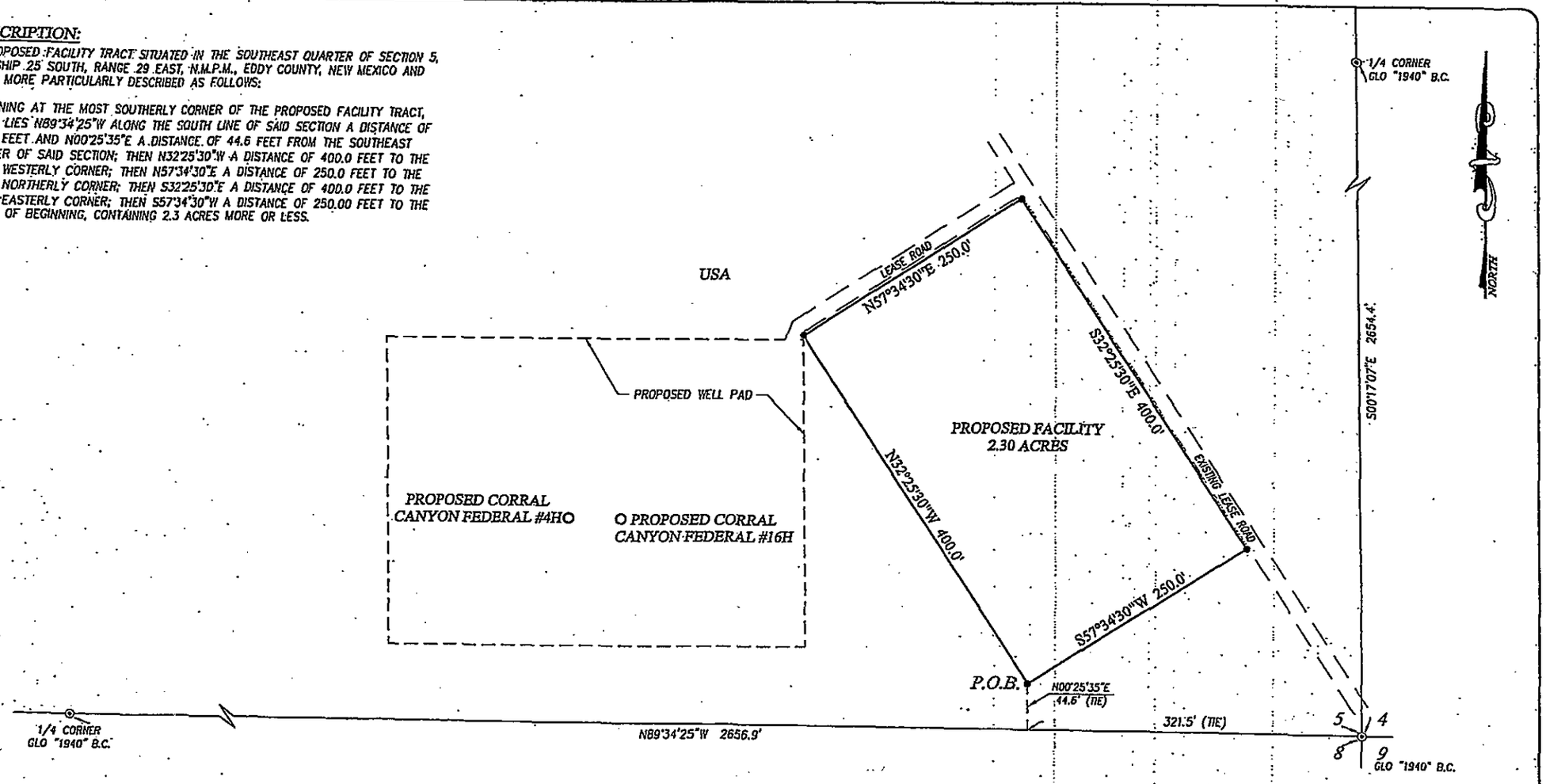


1.25" = 1 mile

DESCRIPTION:

A PROPOSED FACILITY TRACT SITUATED IN THE SOUTHEAST QUARTER OF SECTION 5, TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST SOUTHERLY CORNER OF THE PROPOSED FACILITY TRACT, WHICH LIES N89°34'25"W ALONG THE SOUTH LINE OF SAID SECTION A DISTANCE OF 321.5 FEET AND N00°25'35"E A DISTANCE OF 44.6 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION; THEN N32°25'30"W A DISTANCE OF 400.0 FEET TO THE MOST WESTERLY CORNER; THEN N57°34'30"E A DISTANCE OF 250.0 FEET TO THE MOST NORTHERLY CORNER; THEN S32°25'30"E A DISTANCE OF 400.0 FEET TO THE MOST EASTERLY CORNER; THEN S57°34'30"W A DISTANCE OF 250.00 FEET TO THE POINT OF BEGINNING, CONTAINING 2.3 ACRES MORE OR LESS.



LEGEND:

⊙ DENOTES FOUND CORNER AS NOTED

NOTE

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

100 0 100 200 Feet

Scale: 1"=100'

I, GARY G. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 12641, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

GARY G. EIDSON Gary G Eidson

DATE: 4/3/14

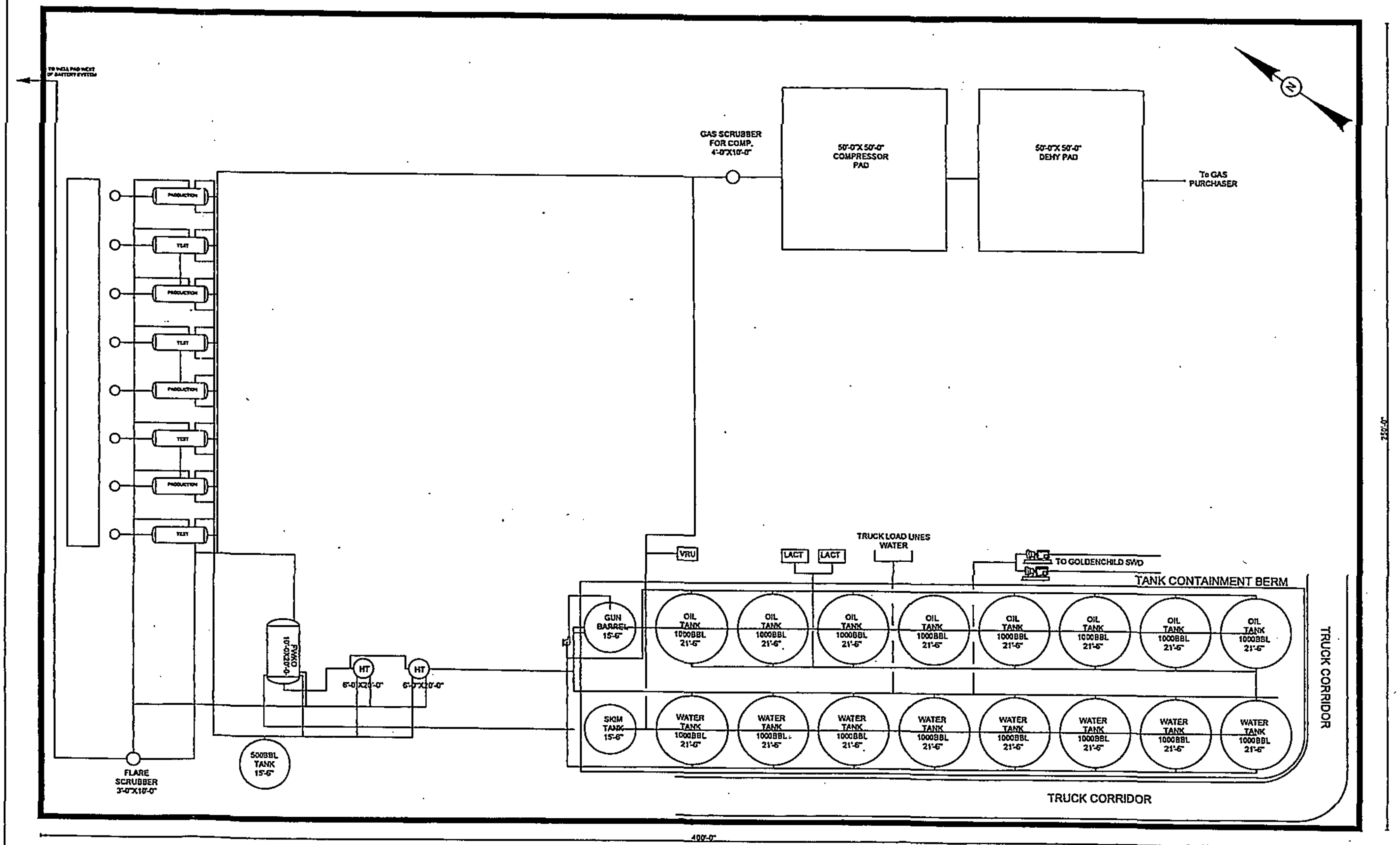
GARY G. EIDSON NEW MEXICO 12641 REGISTERED PROFESSIONAL SURVEYOR

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO . HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

XTO ENERGY

SURVEY FOR A PROPOSED FACILITY SITUATED IN THE SE/4 OF SECTION 5, TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

Survey Date: 03/05/14		CAD Date: 03/25/14	Drawn By: DSS
W.O. No.: 14110263	Rev:	Rel. W.O.:	Sheet 1 of 1



NOTES:
1) 1LONG TERM DRAFT FACILITY LAYOUT DIAGRAM

0a	DRAFT FOR BLM PERMITTING	-26-18	FCF

XTO ENERGY

CORRAL CAYNON
CENTRAL TANK BATTERY
EDDY COUNTY, NEW MEXICO

PLOT PLAN

XTO-PB-CCAN-00CTB-PLOT-000-4527 0a

State of New Mexico
Energy, Minerals and Natural Resources Department

Administrative Order SWD-1458
January 22, 2014

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Pursuant to the provisions of 19.15.26.8B. NMAC, XTO Energy, Incorporated (the "operator") seeks an administrative order for its proposed Goldenchild 6 State Well No. 1 with a location of 800 feet from the South line and 330 feet from the East line, Unit letter P of Section 6, Township 25 South, Range 29 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of 19.15.26.8B. NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

IT IS THEREFORE ORDERED THAT:

The applicant, XTO Energy, Incorporated (OGRID 5380), is hereby authorized to utilize its Goldenchild 6 State Well No. 1 (API 30-015-41846) with a location of 800 feet from the South line and 330 feet from the East line, Unit letter P of Section 6, Township 25 South, Range 29 East, NMPM, Eddy County, for disposal of oil field produced water (UIC Class II only) into the Devonian formation through perforations from approximately 14935 feet to approximately 16500 feet. Injection will occur through 4 ½-inch, internally-coated tubing and a packer set within 100 feet of the permitted interval.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes the well construction proposed and described in the application.

The operator shall supply the Division with a copy of a mudlog over the permitted disposal interval and an estimated insitu water salinity based on open-hole logs. If significant hydrocarbon shows occur while drilling, the operator shall notify the Division's district II and the operator shall be required to receive written permission prior to commencing disposal.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 2987 psig.** In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

The operator shall notify the supervisor of the Division's district II office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district II office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The Division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two (2) years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written

request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

JAMI BAILEY
Director

JB/prg

cc: Oil Conservation Division – Artesia District Office
New Mexico State Land Office – Oil, Gas and Minerals Division

REC'D/MIDLAND

OCT 29 2013

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 Road, 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
30-015-41846	96101	SWD; Devonian
Property Code	**Property Name**	**Well Number**
40277	GOLDENCHILD 6 STATE SWD	1
OGRID No.	**Operator Name**	**Elevation**
005380	XTO ENERGY	2931'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	6	25-S	29-E		800	SOUTH	330	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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

GEODETIC COORDINATES
NAD 27 NME

SURFACE LOCATION
Y=419932.5 N
X=598279.7 E

LAT.=32.154113° N
LONG.=104.015765° W

S.L. 330'
800'

OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Stephanie Rabadue 11-15-13
Signature Date

Stephanie Rabadue
Printed Name

stephanie_rabadue@xtoenergy.com
E-mail Address

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.

OCTOBER 17, 2013

Date of Survey

Signature & Seal of Professional Surveyor:

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

10/28/2013

Certificate Number	Gary G. Eidson	12641
	Ronald J. Eidson	3239

BKL JWSC W.O.: 13.11.1168

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 03358 POD1	C		ED	1	4	1	26	24S	28E	588416	3562115	135		
C 03423	C		ED	2	4	1	26	24S	28E	543750	3561658	126		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 2

PLSS Search:

Section(s): 26 **Township:** 24S **Range:** 28E

New Mexico Office of the State Engineer
Point of Diversion Summary

POD Number	Q64	Q16	Q4	Sec	Twp	Rng	X	Y
C 03358 POD1	1	4	1	26	24S	28E	588416	3562115

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)
(NAD83 UTM in meters)

Driller License: 1229
Driller Name: RICHARD CARTER

Drill Start Date:	04/01/2014	**Drill Finish Date:**	04/06/2014	**Plug Date:**	
Log File Date:	04/11/2014	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	16.00	**Depth Well:**	135 feet	**Depth Water:**	

Water Bearing Stratifications:	Top	Bottom	Description
	35	55	Limestone/Dolomite/Chalk
	115	135	Limestone/Dolomite/Chalk

Casing Perforations:	Top	Bottom
	35	55
	115	126

New Mexico Office of the State Engineer
Point of Diversion Summary

POD Number	Q64	Q16	Q4	Sec	Twp	Rng	X	Y
C 03423	2	4	1	26	24S	28E	543750	3561658

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)
(NAD83 UTM in meters)

Driller License: 410
Driller Name: A.M. BRININSTOOL

Drill Start Date:		**Drill Finish Date:**	12/06/1965	**Plug Date:**	
Log File Date:	12/07/1965	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	16.00	**Depth Well:**	126 feet	**Depth Water:**	

Water Bearing Stratifications:	Top	Bottom	Description
	115	125	Limestone/Dolomite/Chalk

Casing Perforations:	Top	Bottom
	45	125

EXHIBIT F F.1

Rig Plat Diagram Only – Dual Well Pad Layout

Corral Canyon Federal Wells: #1H, #2H, #3H, 5H, #6H, #7H, #12H, #13H, #14H, #15H, #17H, #18H, #19H, #24H

V-Door East

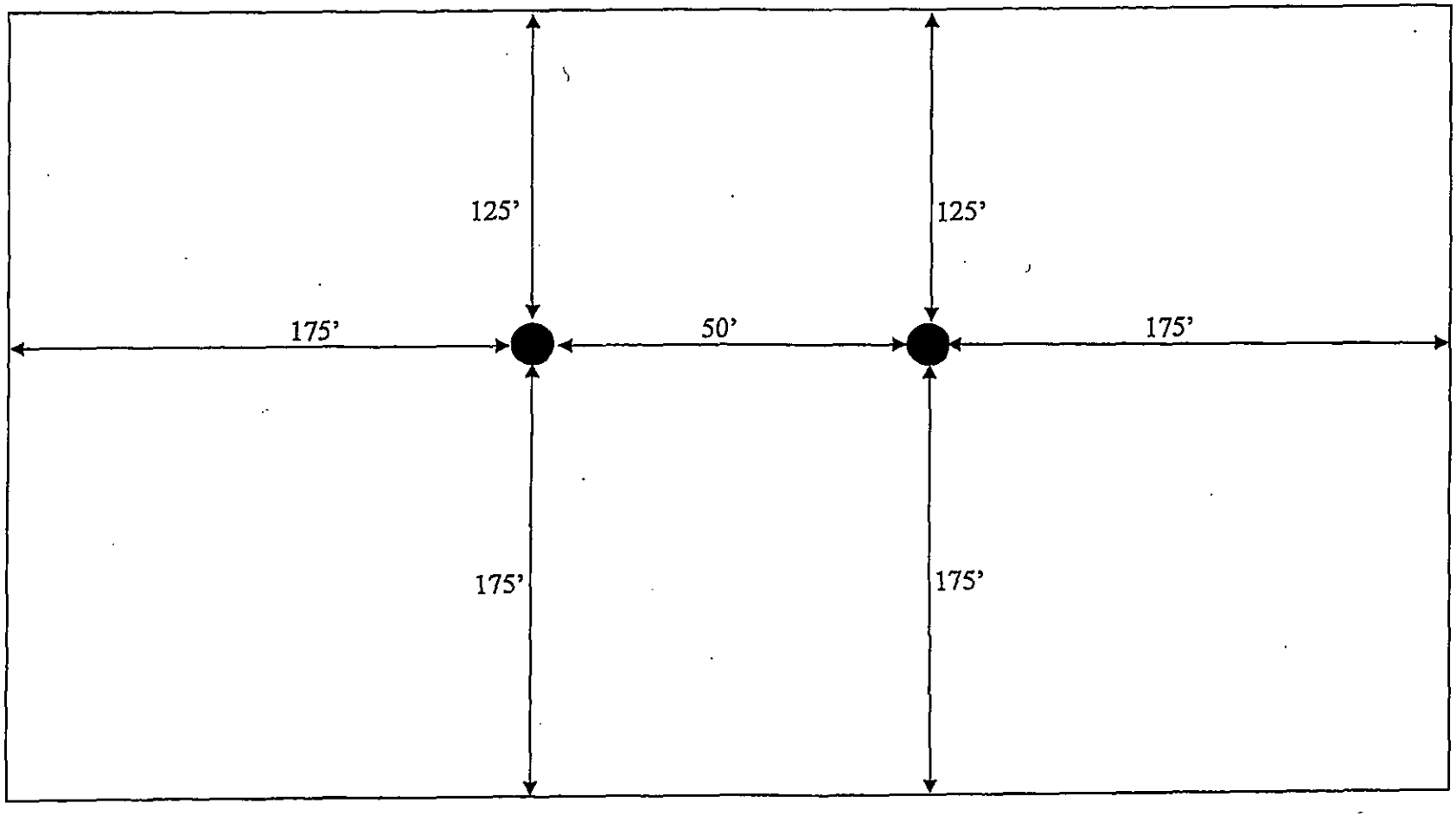


Exhibit "F" F.1 V-Door East Rig Layout

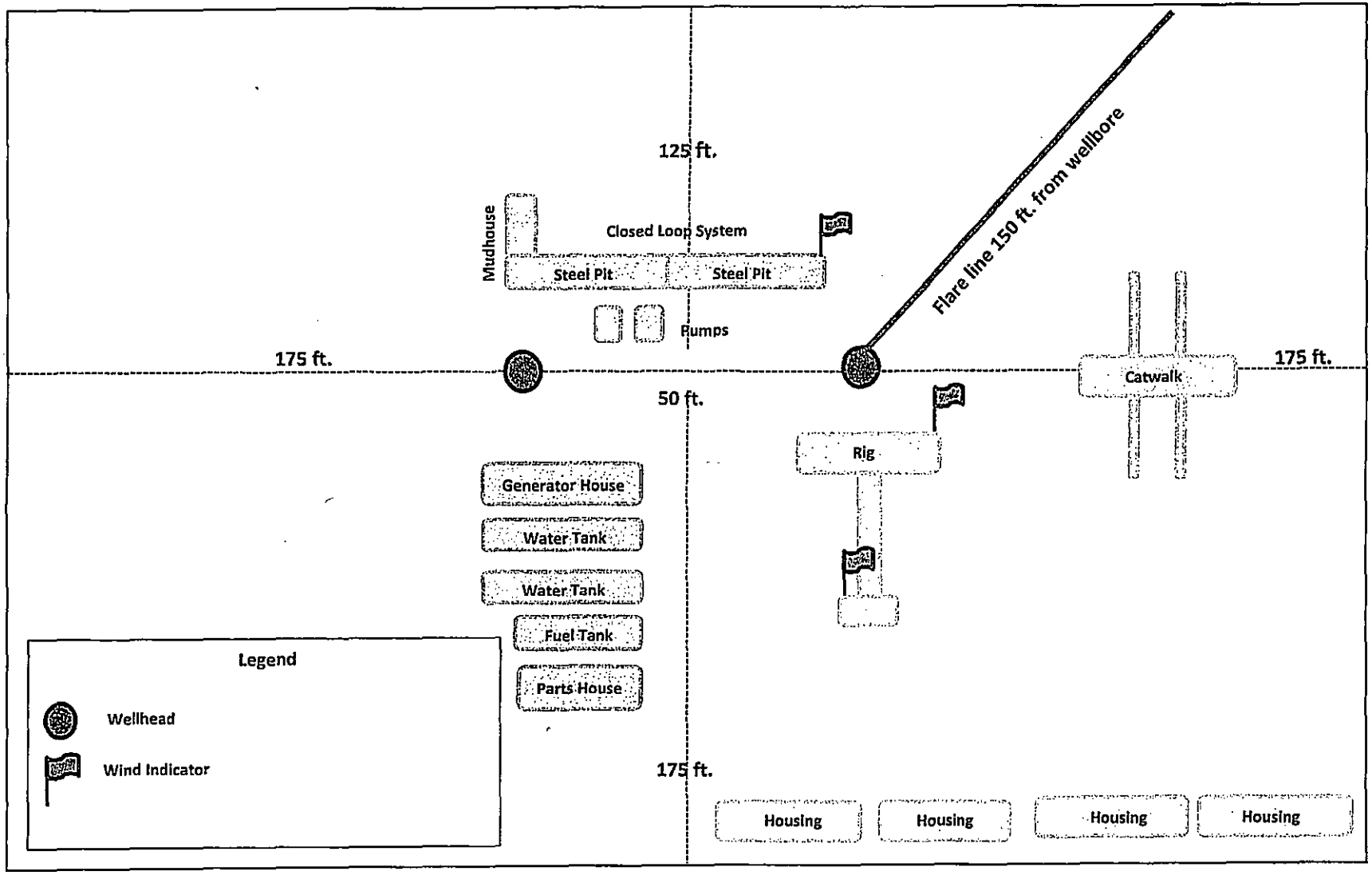
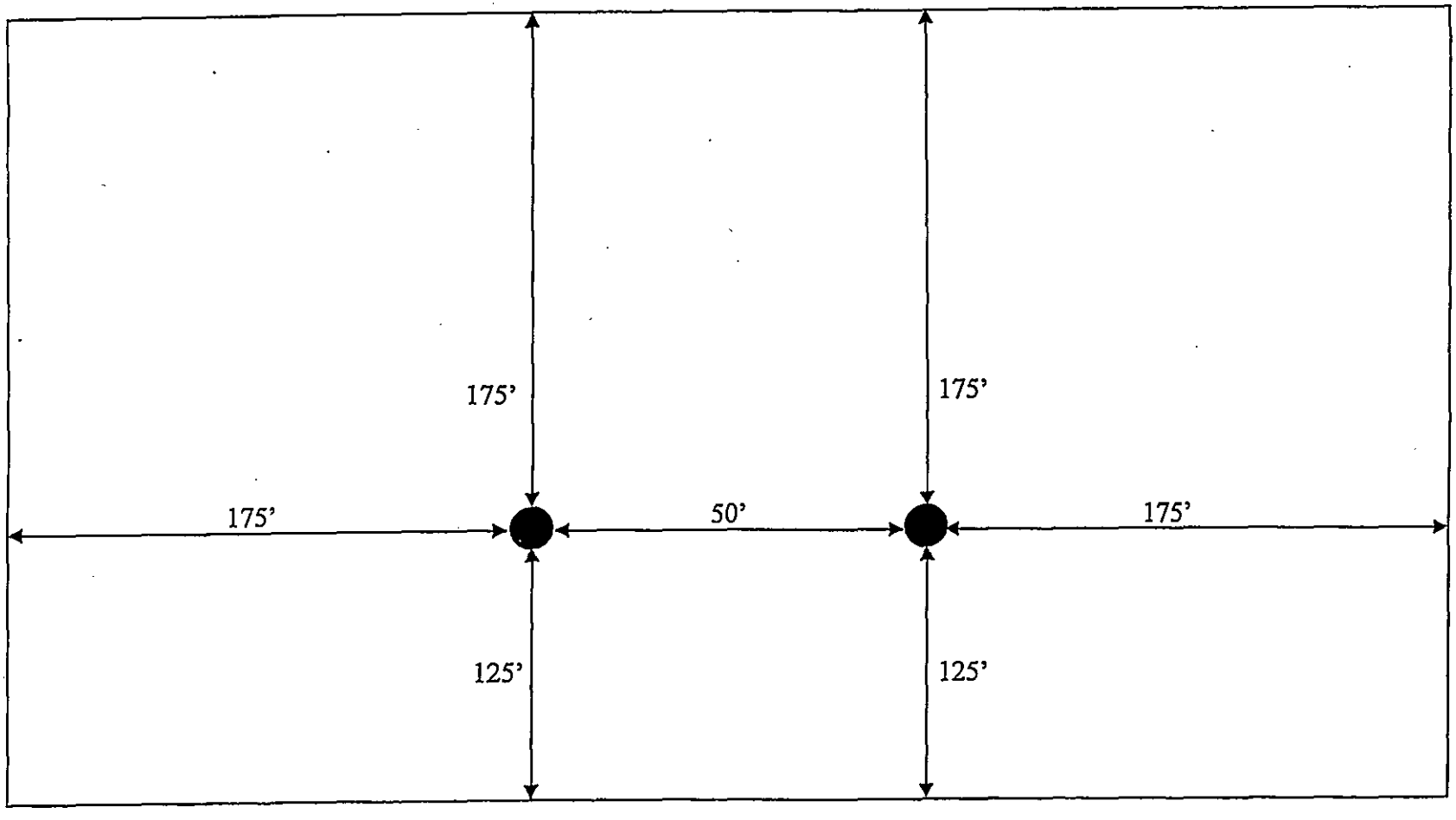


EXHIBIT F F.2

Rig Plat Diagram Only– Dual Well Pad Layout

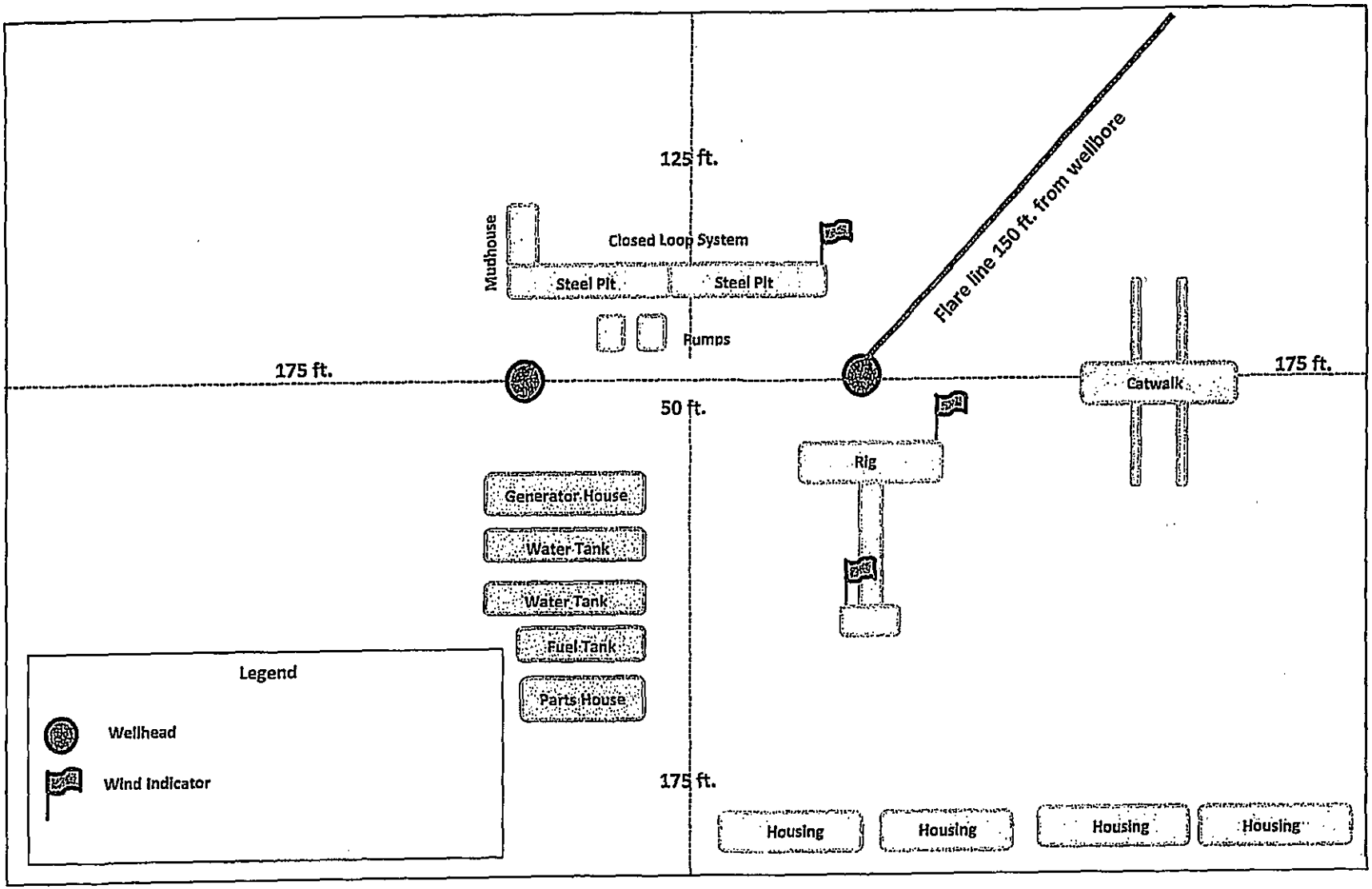
Corral Canyon Federal Wells: #4H, #8H, #9H, #10H, #11H, #16H, #20H, #21H, #22H, #23H

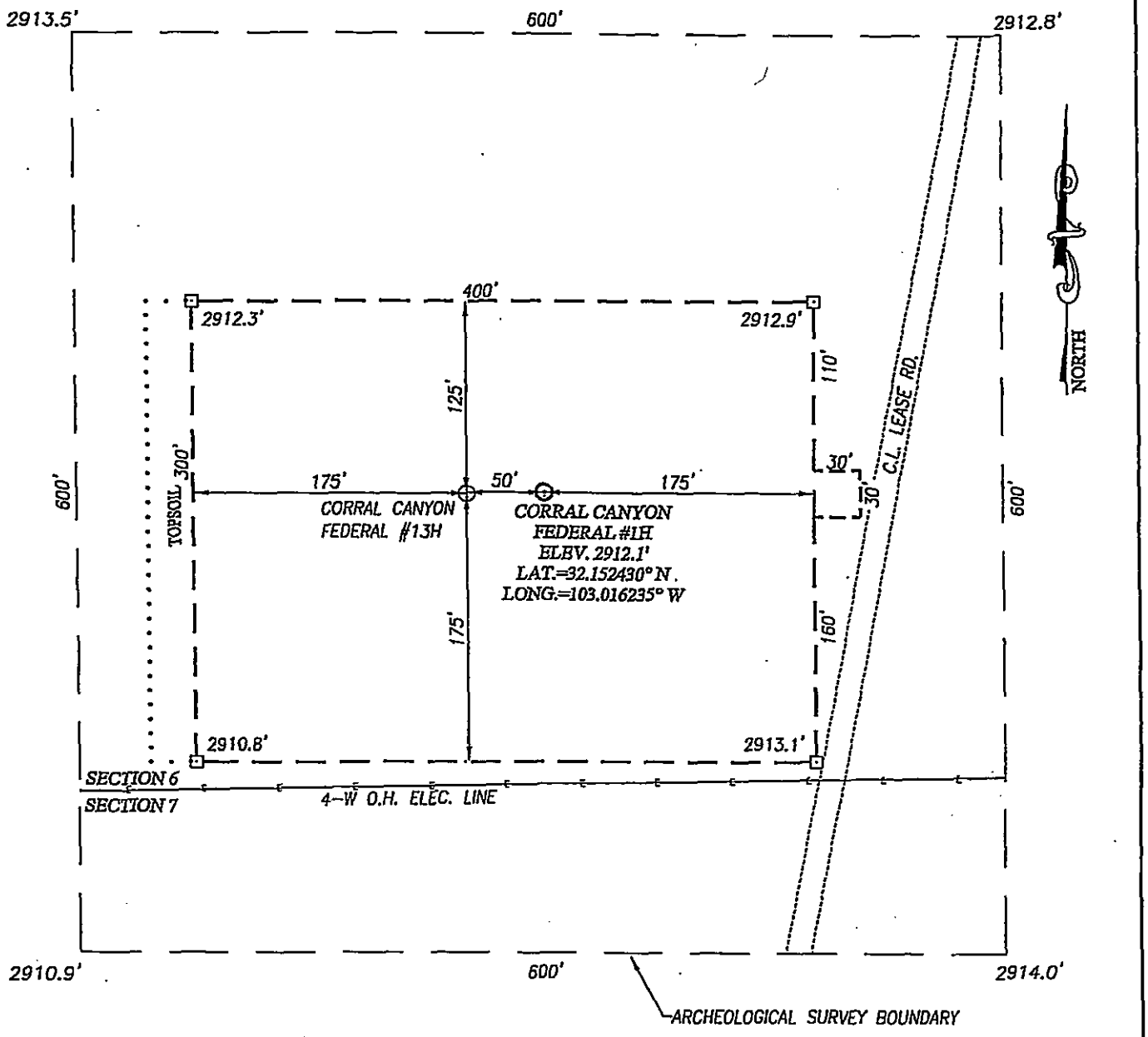
V-Door West



S

Exhibit "F" F.2 V-Door West Rig Layout





DIRECTIONS TO CORRAL CANYON FEDERAL #2H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND FOLLOW WINDING ROAD WEST APPROX. 1.3 MILES. THE LOCATION STAKE IS APPROX. 400 FEET SOUTH.

100 0 100 200 Feet

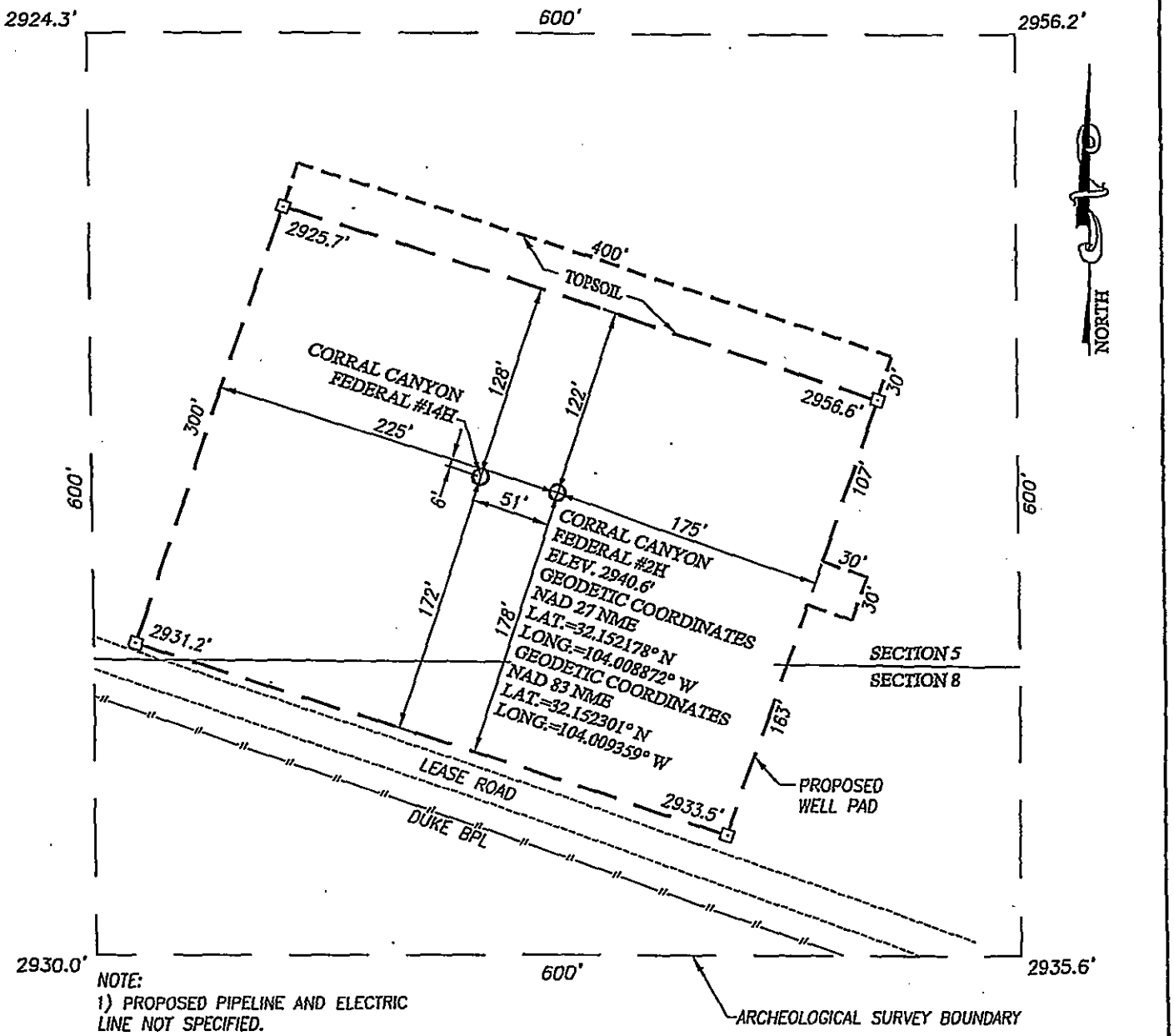
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #1H WELL
LOCATED 190 FEET FROM THE SOUTH LINE
AND 470 FEET FROM THE EAST LINE OF SECTION 6,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 4/2/14	CAD Date: 5/16/14	Drawn By: ACK
W.O. No.: 14110214	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #2H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH–NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND GO SOUTHWEST APPROX. 0.25 MILES. TURN RIGHT AND GO NORTHWEST APPROX. 0.5 MILES. THE LOCATION STAKE IS APPROX. 200 FEET NORTH.

100 0 100 200 Feet

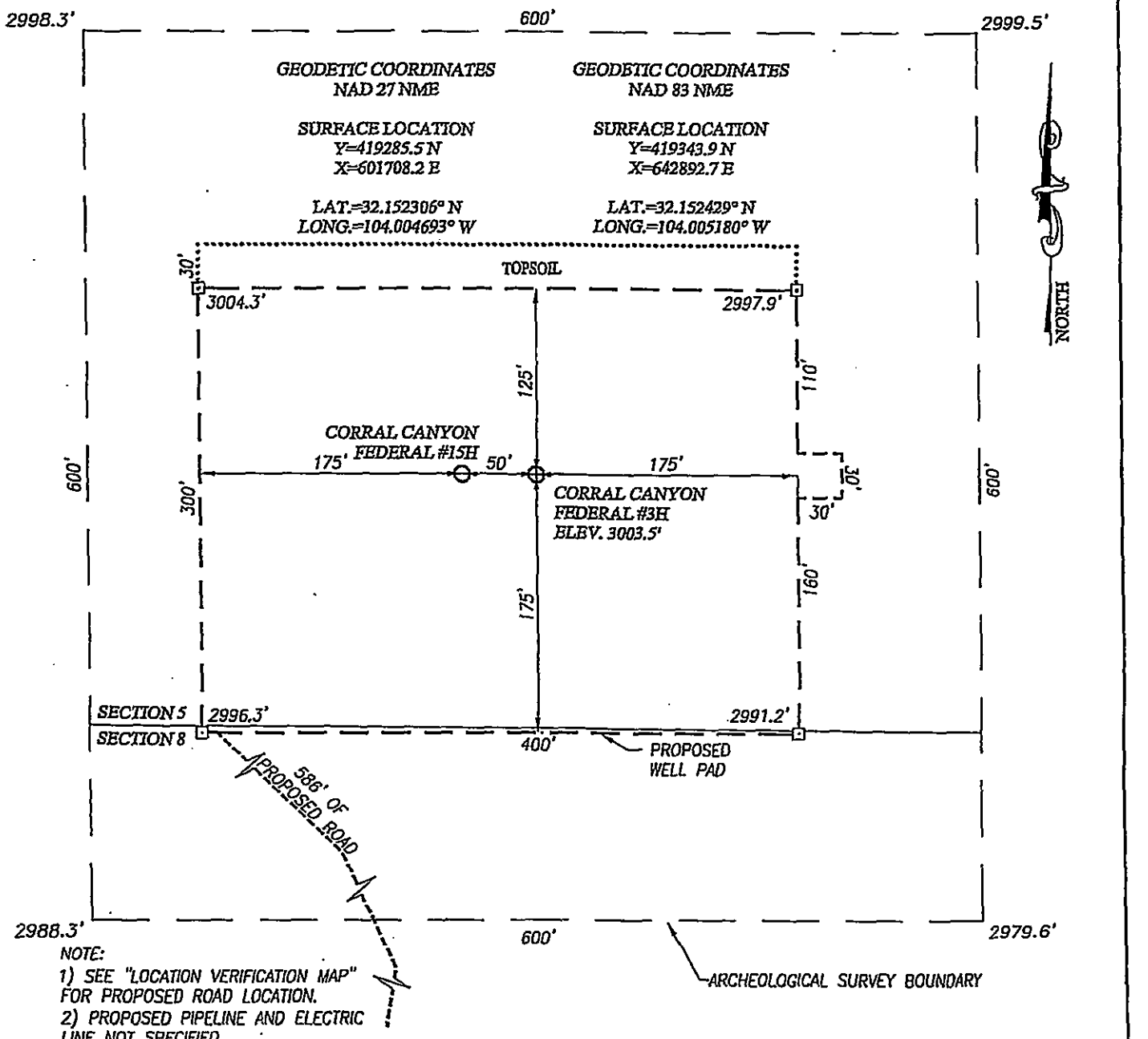
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #2H WELL
LOCATED 110 FEET FROM THE SOUTH LINE
AND 1810 FEET FROM THE WEST LINE OF SECTION 5,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 03/06/14	CAD Date: 03/25/14	Drawn By: DSS
W.O. No.: 14110216	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.
2) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #3H:

FROM THE INTERSECTION OF U.S. HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD), GO NORTHEAST ALONG CO. RD. 725 APPROX. 4.2 MILES PASS THE PECOS RIVER AND TO A "Y" INTERSECTION; TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES; TURN LEFT AND GO NORTH–NORTHWESTERY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND GO SOUTHWEST APPROX. 0.5 MILES TO A PROPOSED SURVEY. FOLLOW ROAD SURVEY NORTHWEST APPROX. 586 FEET. THIS LOCATION IS NORTHEAST APPROX. 277 FEET.

100 0 100 200 Feet

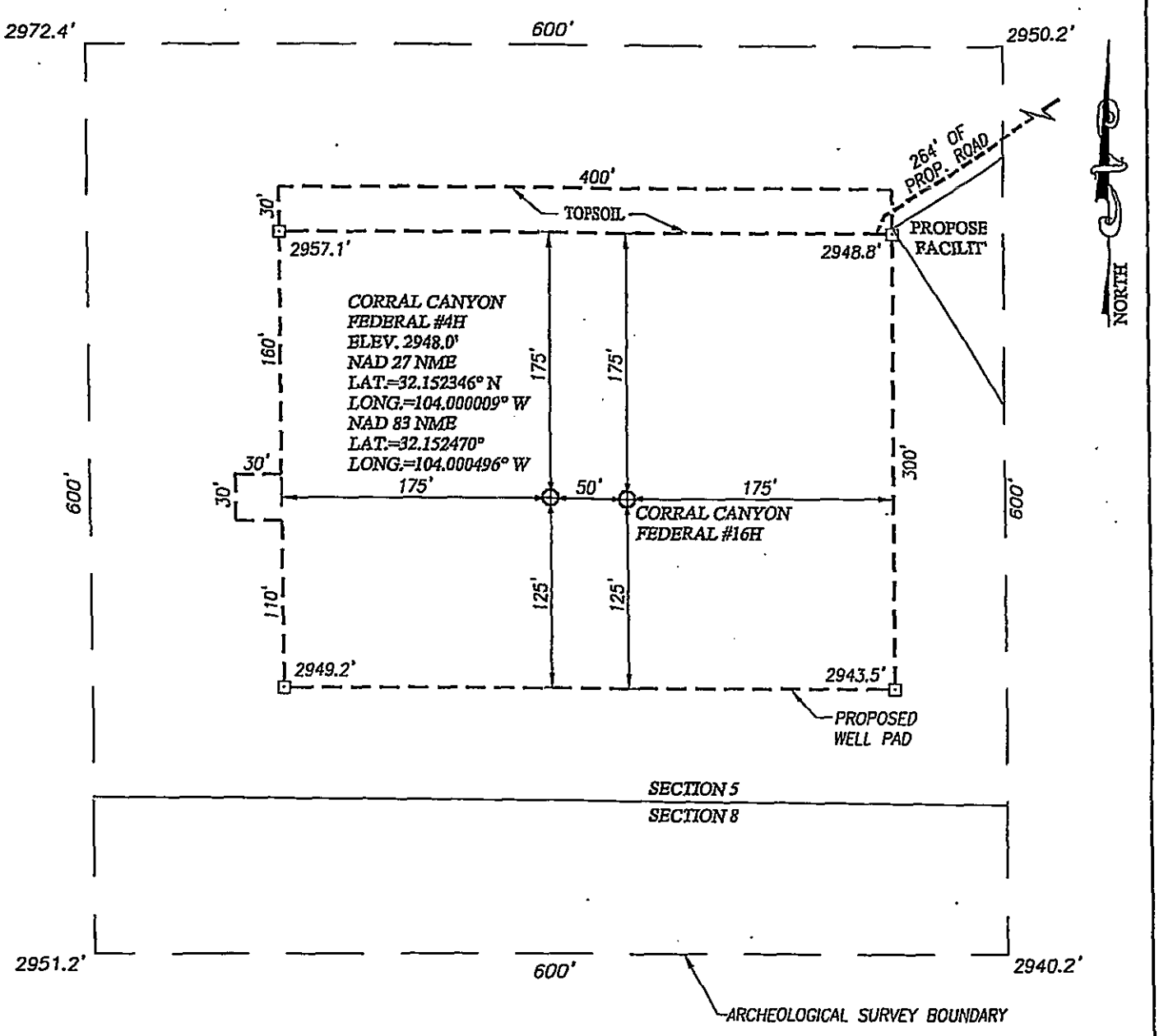
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #3H WELL
LOCATED 170 FEET FROM THE SOUTH LINE
AND 2210 FEET FROM THE EAST LINE OF SECTION 5,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 3/5/14	CAD Date: 3/28/14	Drawn By: ACK
W.O. No.: 14110218	Rev: .	Rel. W.O.:	Sheet 1 of 1



DIRECTIONS TO CORRAL CANYON FEDERAL #4H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. VEER LEFT AND GO NORTH-NORTHWEST APPROX. 1.5 MILES TO PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY STAKES SOUTHWEST APPROX. 264 FEET TO THE NORTHEAST CORNER OF PROPOSED WELL PAD. THIS LOCATION STAKE IS APPROX. 277 FEET SOUTHWEST.

NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.
2) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

100 0 100 200 Feet

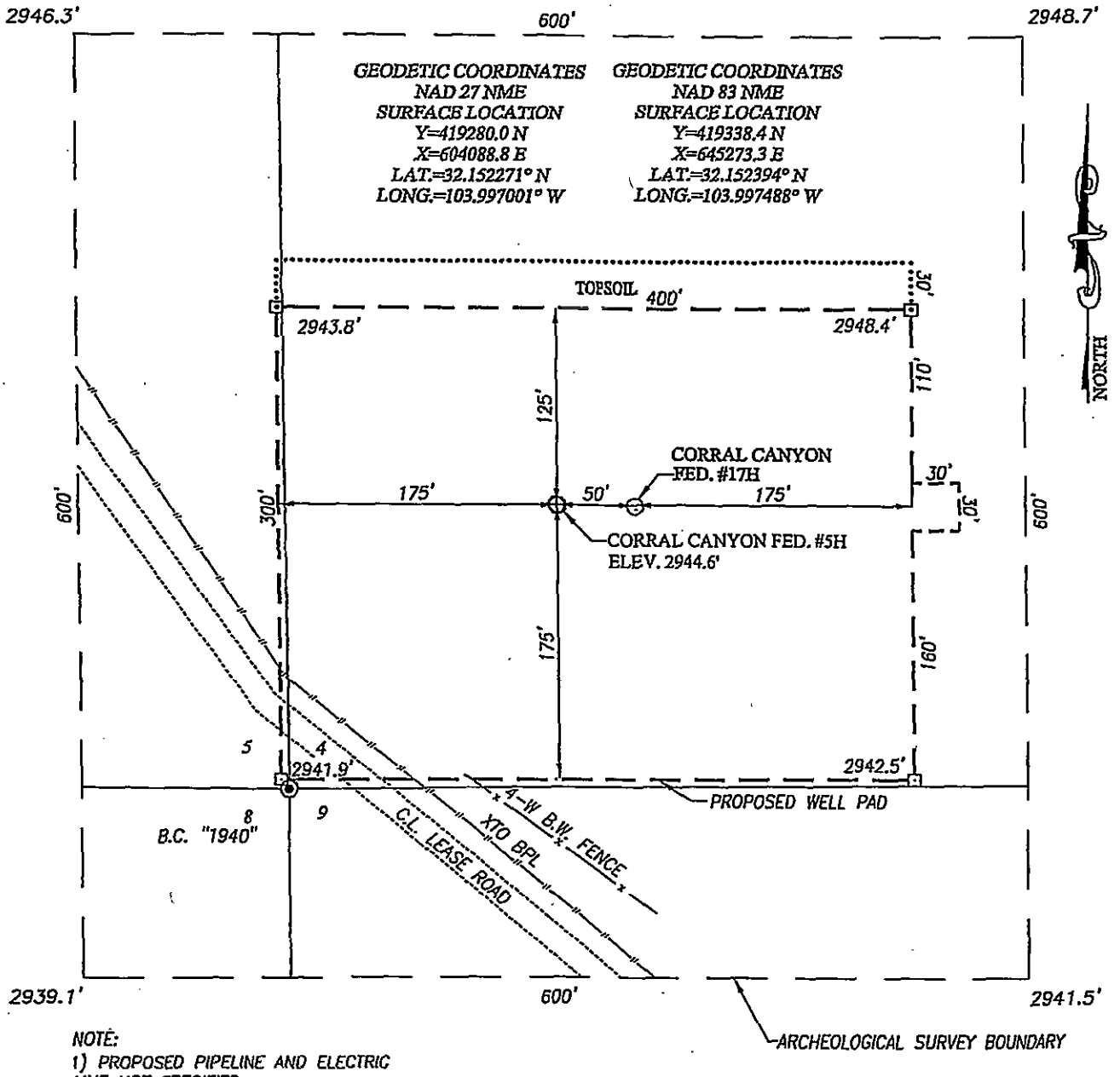
Scale: 1"=100'

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

XTO ENERGY

CORRAL CANYON FEDERAL #4H WELL
LOCATED 200 FEET FROM THE SOUTH LINE
AND 760 FEET FROM THE EAST LINE OF SECTION 5,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 03/05/14	CAD Date: 03/26/14	Drawn By: DSS
W.O. No.: 14110220	Rev: .	Rel. W.O.:	Sheet 1 of 1



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #5H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND GO NORTHWEST APPROX. 300 FEET. THIS LOCATION IS NORTHEAST APPROX. 215 FEET.

100 0 100 200 Feet

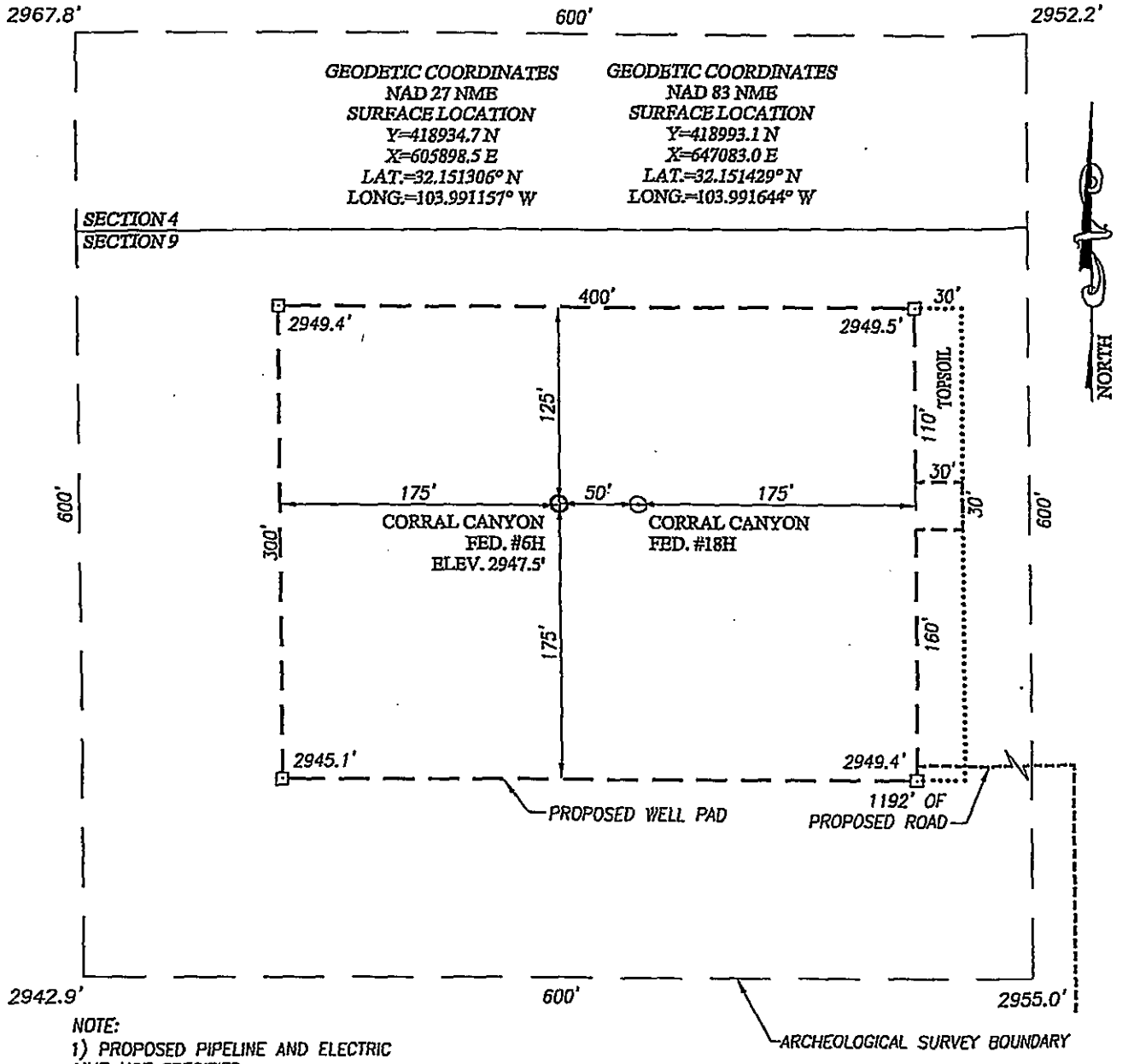
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #5H WELL
LOCATED 180 FEET FROM THE SOUTH LINE
AND 171 FEET FROM THE WEST LINE OF SECTION 4,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 4/4/14	CAD Date: 5/1/14	Drawn By: ACK
W.O. No.: 14110222	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #6H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 4.8 MILES. TURN RIGHT AND GO EAST APPROX. 0.3 MILES TO PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY NORTH EASTERLY DIRECTION APPROX. 700 FEET; TURN LEFT AND GO NORTHWEST APPROX. 142 FEET; TURN RIGHT AND GO NORTH APPROX. 185 FEET; TURN LEFT AND GO WEST APPROX. 165 FEET TO THE SOUTHEAST CORNER PROPOSED WELL PAD. THIS LOCATION IS NORTHWEST APPROX. 280 FEET.

100 0 100 200 Feet

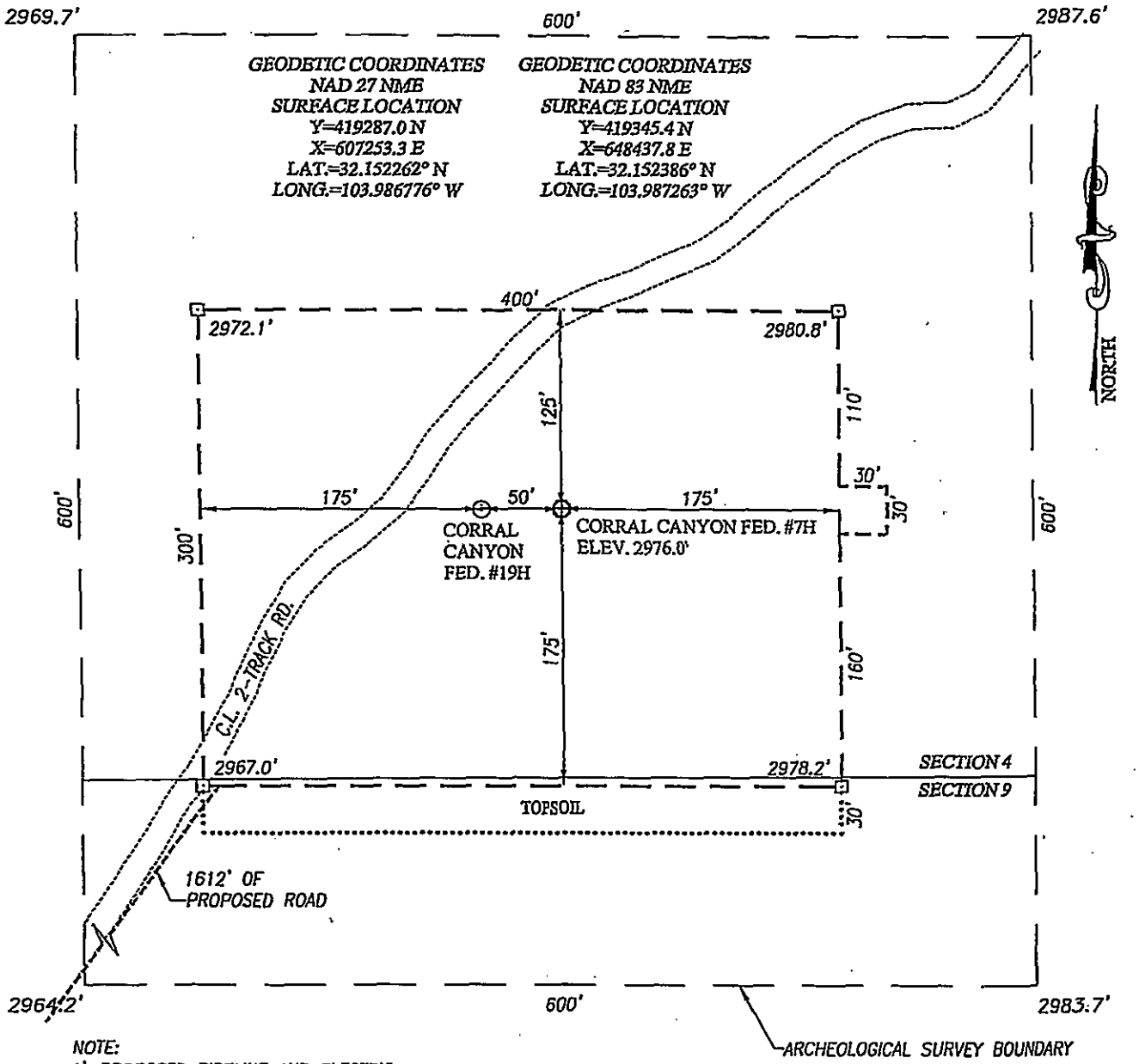
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #6H WELL
LOCATED 175 FEET FROM THE NORTH LINE
AND 1980 FEET FROM THE WEST LINE OF SECTION 9,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 4/7/14	CAD Date: 5/2/14	Drawn By: ACK
W.O. No.: 14110224	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #7H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH--NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 4.8 MILES. TURN RIGHT AND GO EAST APPROX. 0.3 MILES TO PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY NORTHEASTERLY DIRECTION APPROX. 1605 FEET TO THE SOUTHWEST CORNER PROPOSED WELL PAD. THIS LOCATION IS NORTH APPROX. 280 FEET.

100 0 100 200 Feet

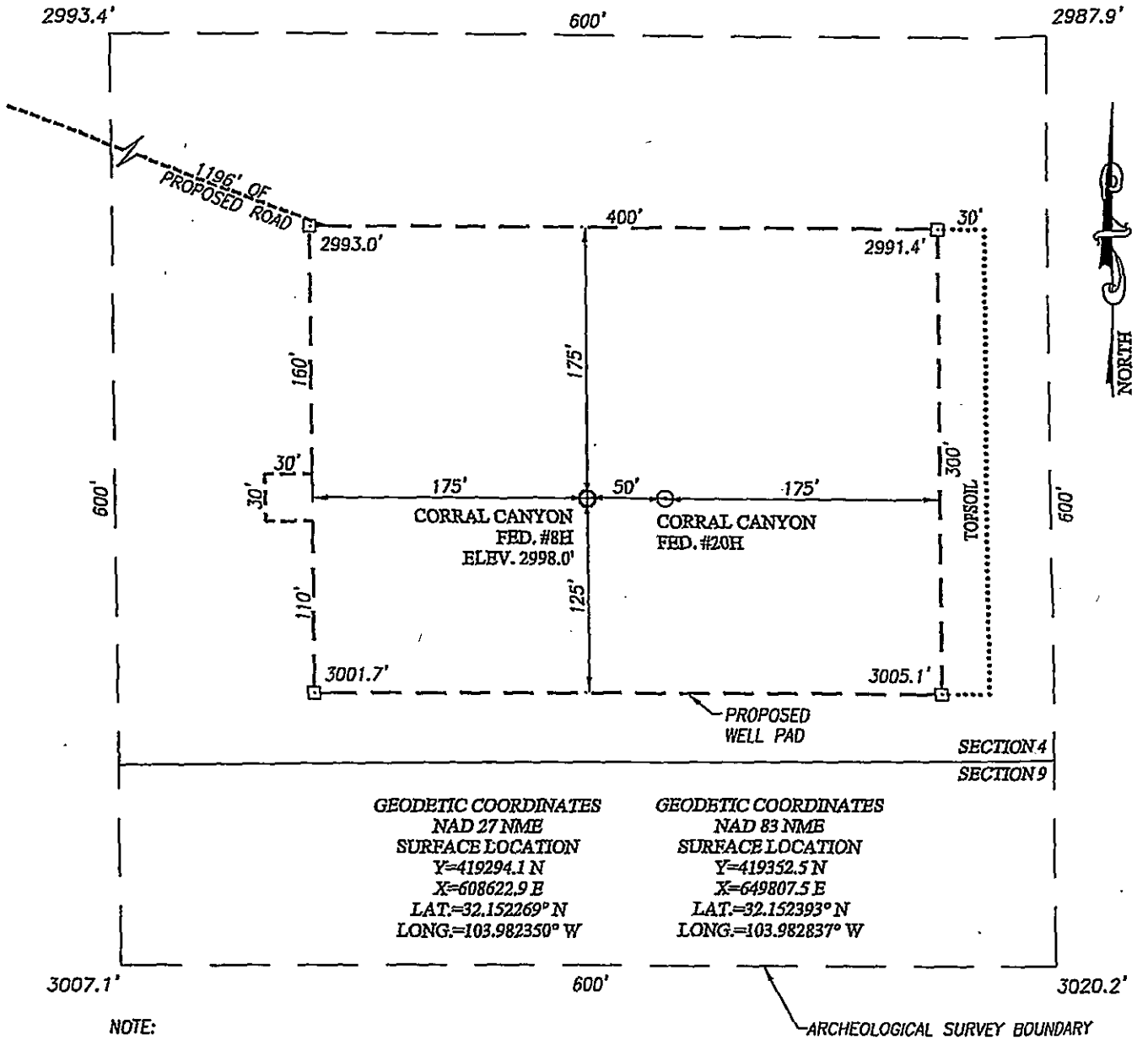
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #7H WELL
LOCATED 170 FEET FROM THE SOUTH LINE
AND 1980 FEET FROM THE EAST LINE OF SECTION 4,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 4/8/14	CAD Date: 5/1/14	Drawn By: ACK
W.O. No.: 14110226	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #8H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 4.8 MILES. TURN RIGHT AND GO EAST APPROX. 0.3 MILES TO PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY NORTHEAST APPROX. 1612 FEET TO THE SOUTHWEST CORNER PROPOSED WELL PAD FOR THE CORRAL CANYON FEDERAL #7H AND #19H. AT THE NORTHEAST CORNER OF THIS WELL PAD FOLLOW PROPOSED ROAD NORTH APPROX. 80 FEET, THEN NORTHEAST APPROX. 580 FEET; THEN SOUTHEAST APPROX. 538 FEET TO THE NORTHWEST CORNER PROPOSED WELL PAD FOR THIS WELL PAD. THIS WELL IS SOUTHEAST APPROX. 240 FEET.

100 0 100 200 Feet

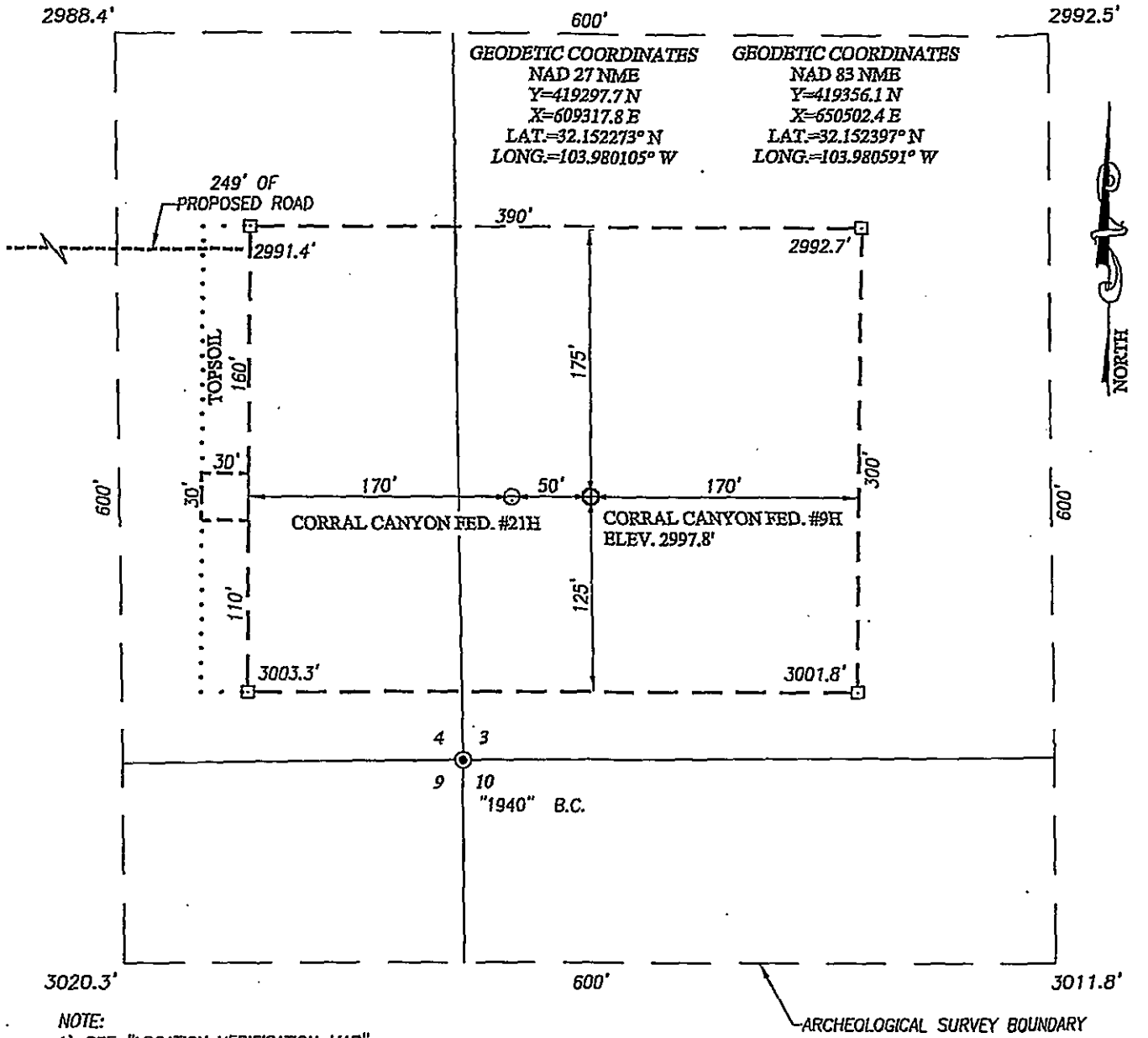
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #8H WELL
LOCATED 170 FEET FROM THE SOUTH LINE
AND 610 FEET FROM THE EAST LINE OF SECTION 4,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 4/9/14	CAD Date: 5/1/14	Drawn By: ACK
W.O. No.: 14110228	Rev: .	Rel. W.O.:	Sheet 1 of 1



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO CORRAL CANYON FEDERAL #9H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH–NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 3.4 MILES. STAY ON WINDING ROAD AND GO NORTH–NORTHEAST APPROX. 1.4 MILES. TURN LEFT AND GO NORTH APPROX. 0.7 MILES. TURN LEFT AND GO WEST FOLLOWING WINDING ROAD APPROX. 1.0 MILE TO A ROAD SURVEY. FOLLOW ROAD SURVEY STAKES 249 FEET EAST TO THE LOCATION.

100 0 100 200 Feet

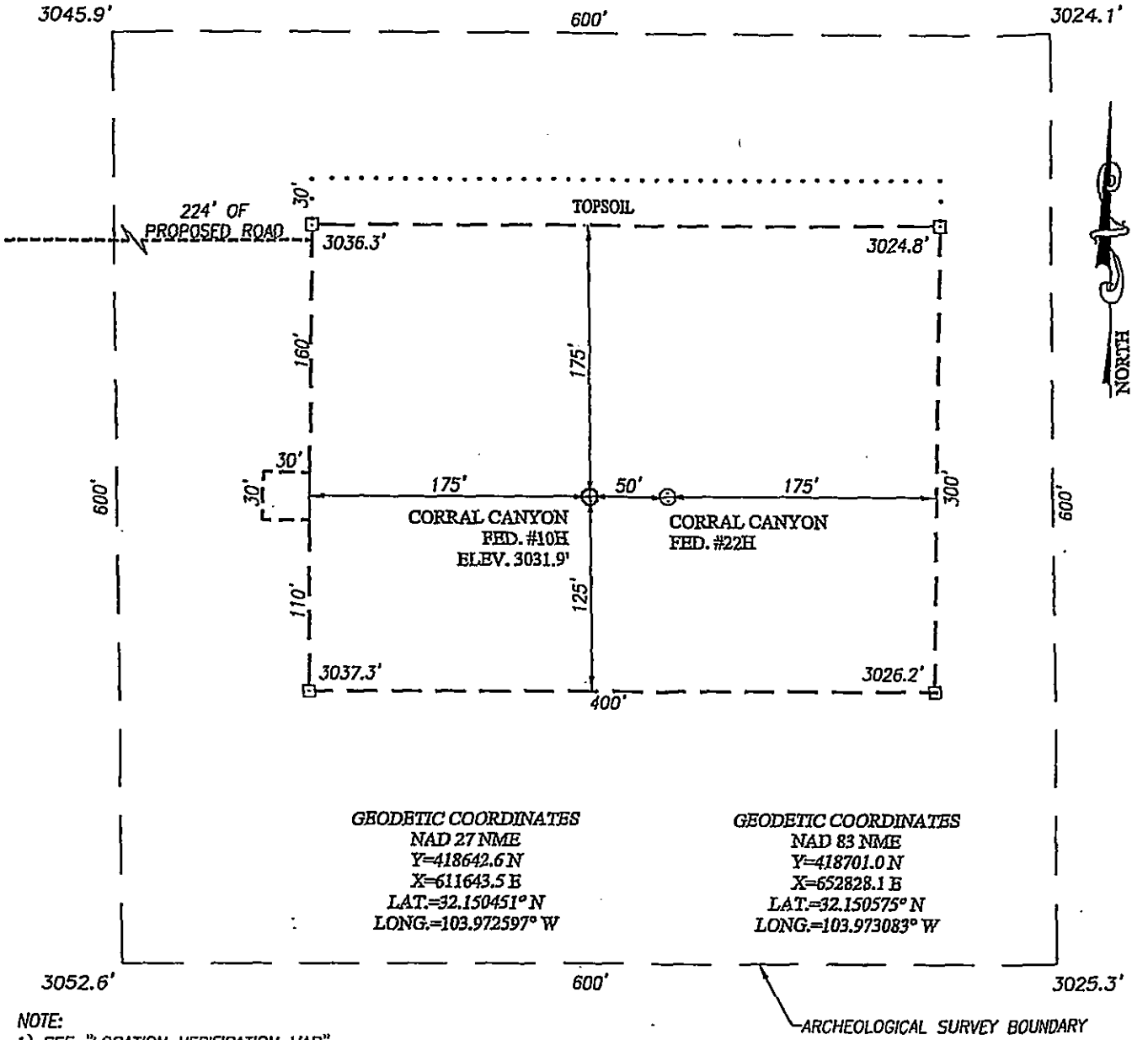
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #9H WELL
LOCATED 170 FEET FROM THE SOUTH LINE
AND 84 FEET FROM THE WEST LINE OF SECTION 3,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 4/28/14	CAD Date: 5/19/14	Drawn By: ACK
W.O. No.: 14110430	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO CORRAL CANYON FEDERAL #10H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 3.4 MILES. STAY ON WINDING ROAD AND GO NORTH-NORTHEAST APPROX. 1.4 MILES. TURN LEFT AND GO NORTH APPROX. 0.7 MILES. TURN LEFT AND GO WEST FOLLOWING WINDING ROAD APPROX. 0.5 MILES TO A ROAD SURVEY. FOLLOW ROAD SURVEY STAKES 225 FEET EAST TO THE LOCATION.

100 0 100 200 Feet

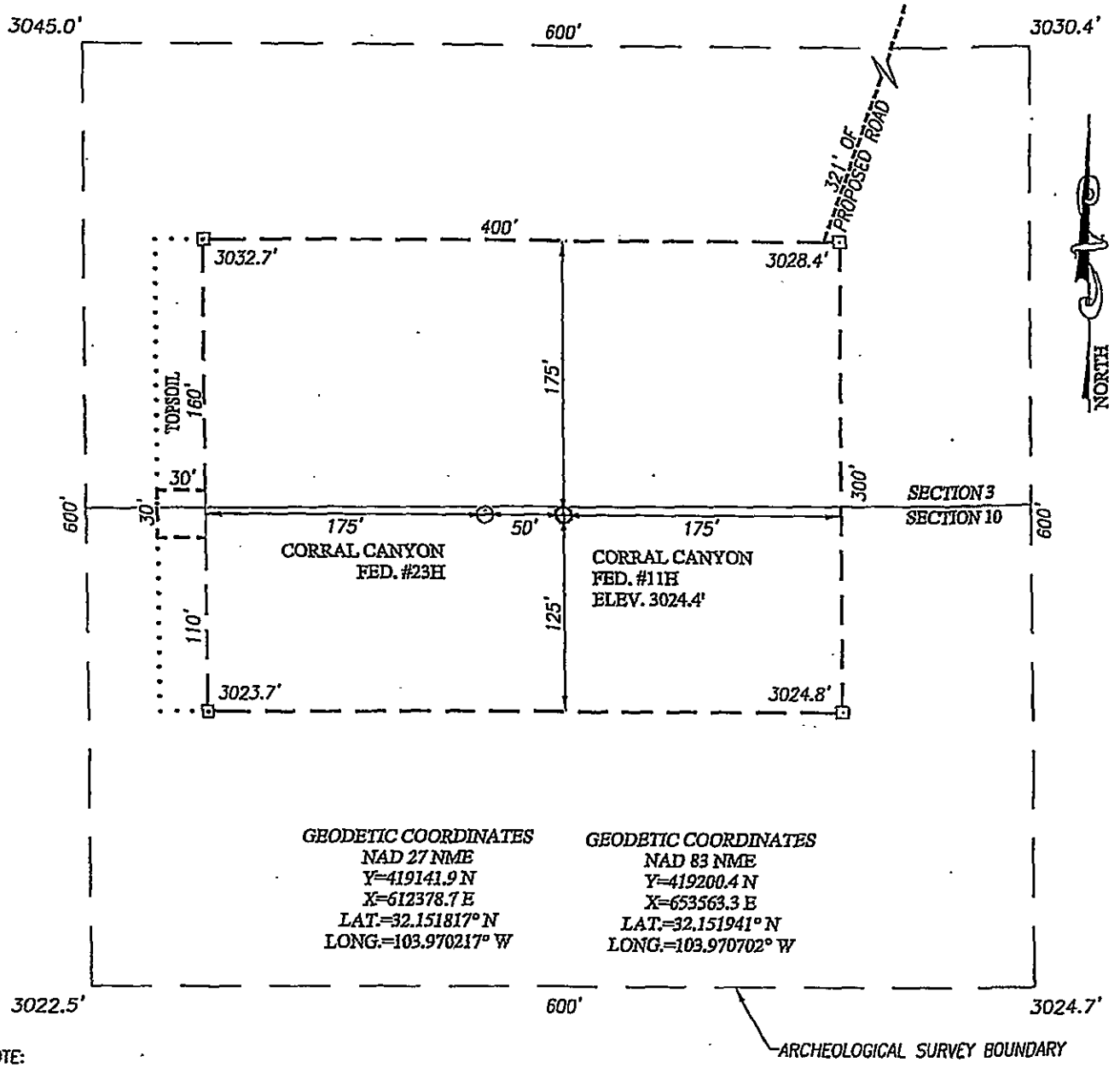
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #10H WELL
LOCATED 500 FEET FROM THE NORTH LINE
AND 2410 FEET FROM THE WEST LINE OF SECTION 10,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 4/29/14	CAD Date: 5/20/14	Drawn By: ACK
W.O. No.: 14110432	Rev: .	Rel. W.O.:	Sheet 1 of 1



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO CORRAL CANYON FEDERAL #11H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 3.4 MILES. STAY ON WINDING ROAD AND GO NORTH-NORTHEAST APPROX. 1.4 MILES. TURN LEFT AND GO NORTH APPROX. 0.7 MILES. TURN LEFT AND GO WEST FOLLOWING WINDING ROAD APPROX. 0.1 MILE TO A ROAD SURVEY. FOLLOW ROAD SURVEY STAKES 321 FEET SOUTH TO THE LOCATION.

100 0 100 200 Feet

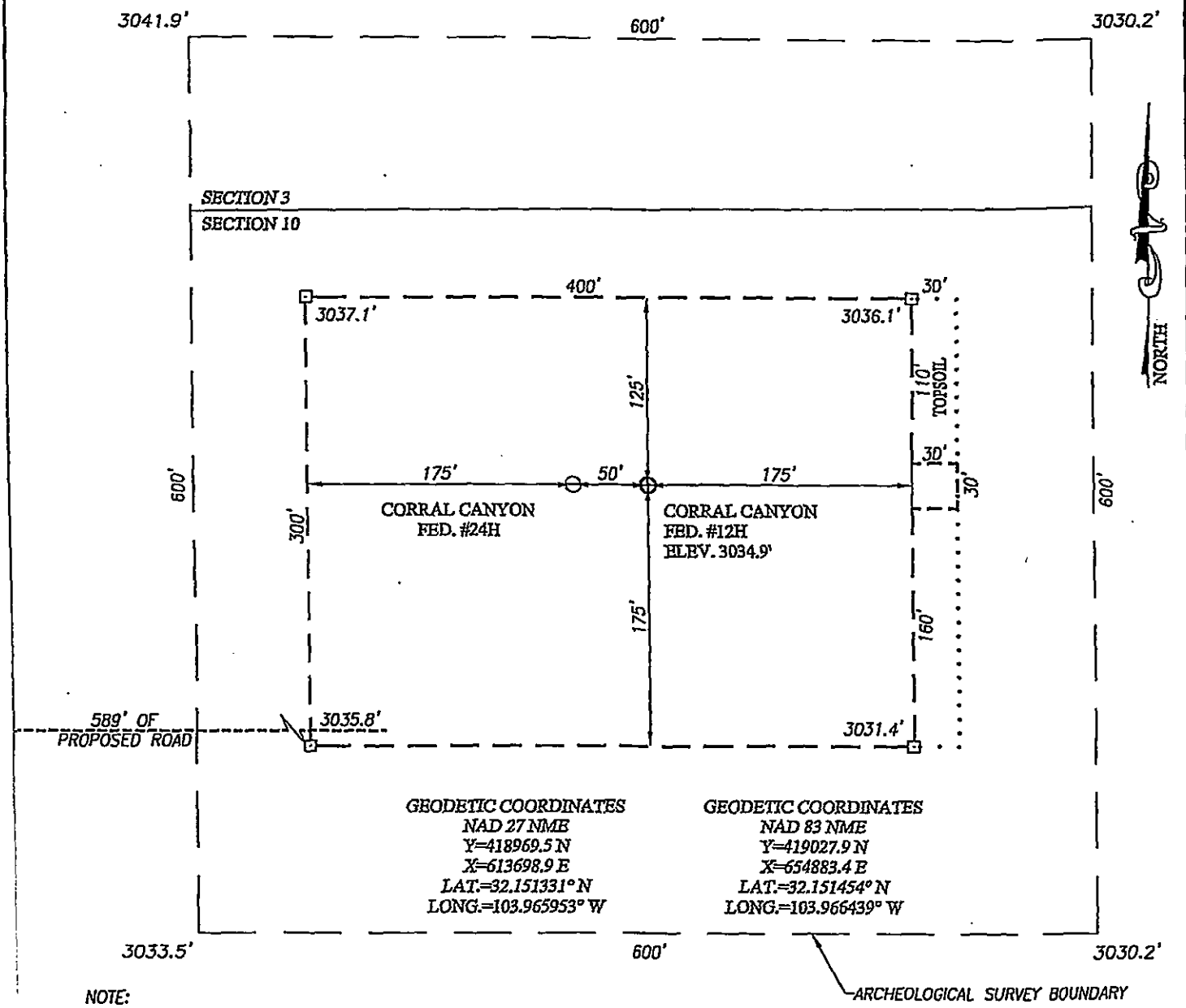
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #11H WELL
LOCATED 5 FEET FROM THE NORTH LINE
AND 2155 FEET FROM THE EAST LINE OF SECTION 10,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 5/5/14	CAD Date: 5/20/14	Drawn By: ACK
W.O. No.: 14110434	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO CORRAL CANYON FEDERAL #12H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 3.4 MILES. STAY ON WINDING ROAD AND GO NORTH-NORTHEAST APPROX. 1.4 MILES. TURN LEFT AND GO NORTH APPROX. 0.5 MILES TO A ROAD SURVEY. FOLLOW ROAD SURVEY STAKES 589 FEET SOUTH TO THE LOCATION.

100 0 100 200 Feet

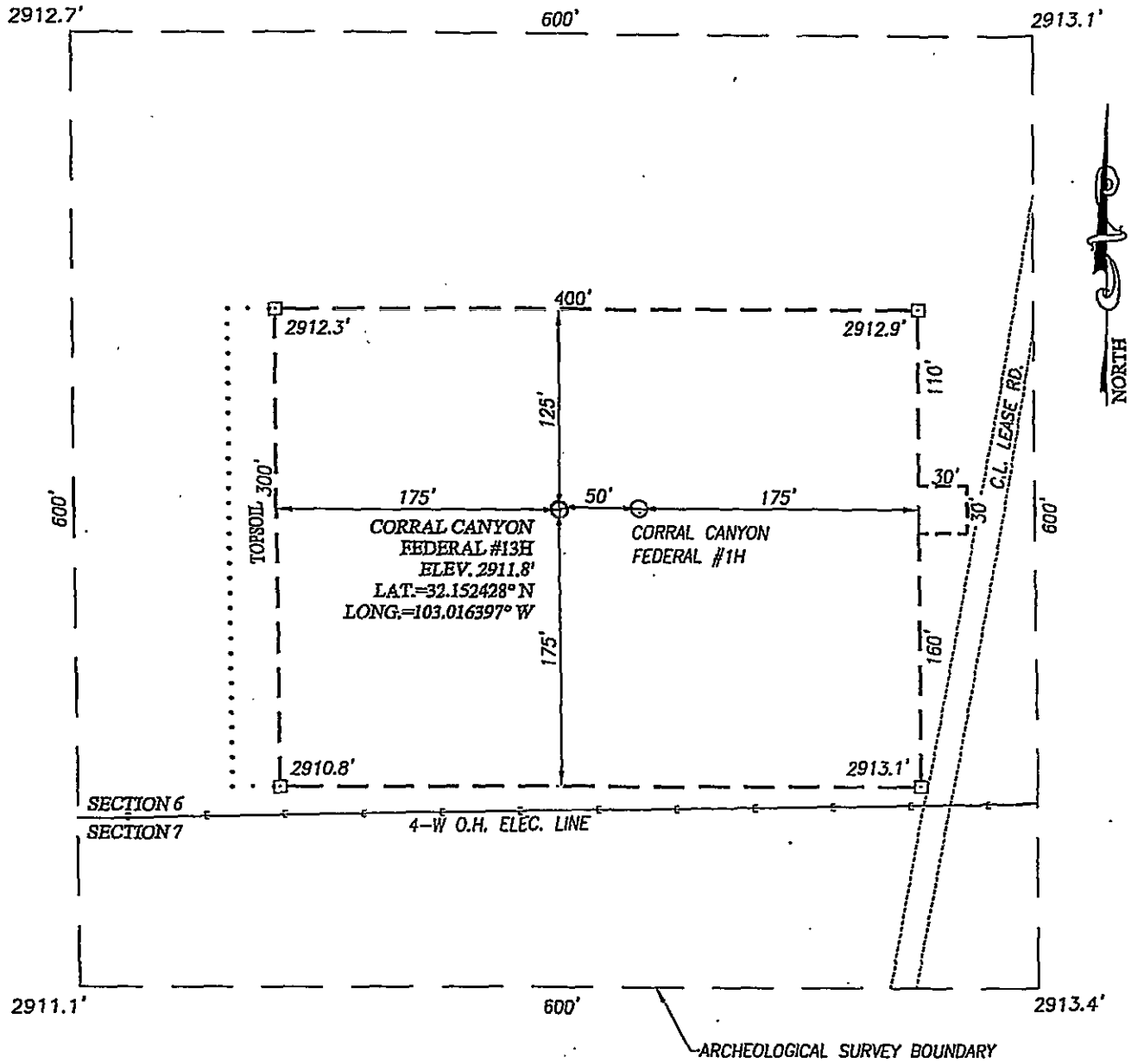
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #12H WELL
LOCATED 185 FEET FROM THE NORTH LINE
AND 885 FEET FROM THE EAST LINE OF SECTION 10,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 5/2/14	CAD Date: 5/20/14	Drawn By: ACK
W.O. No.: 14110436	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



DIRECTIONS TO CORRAL CANYON FEDERAL #2H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND FOLLOW WINDING ROAD WEST APPROX. 1.3 MILES. THE LOCATION STAKE IS APPROX. 400 FEET SOUTH.

100 0 100 200 Feet

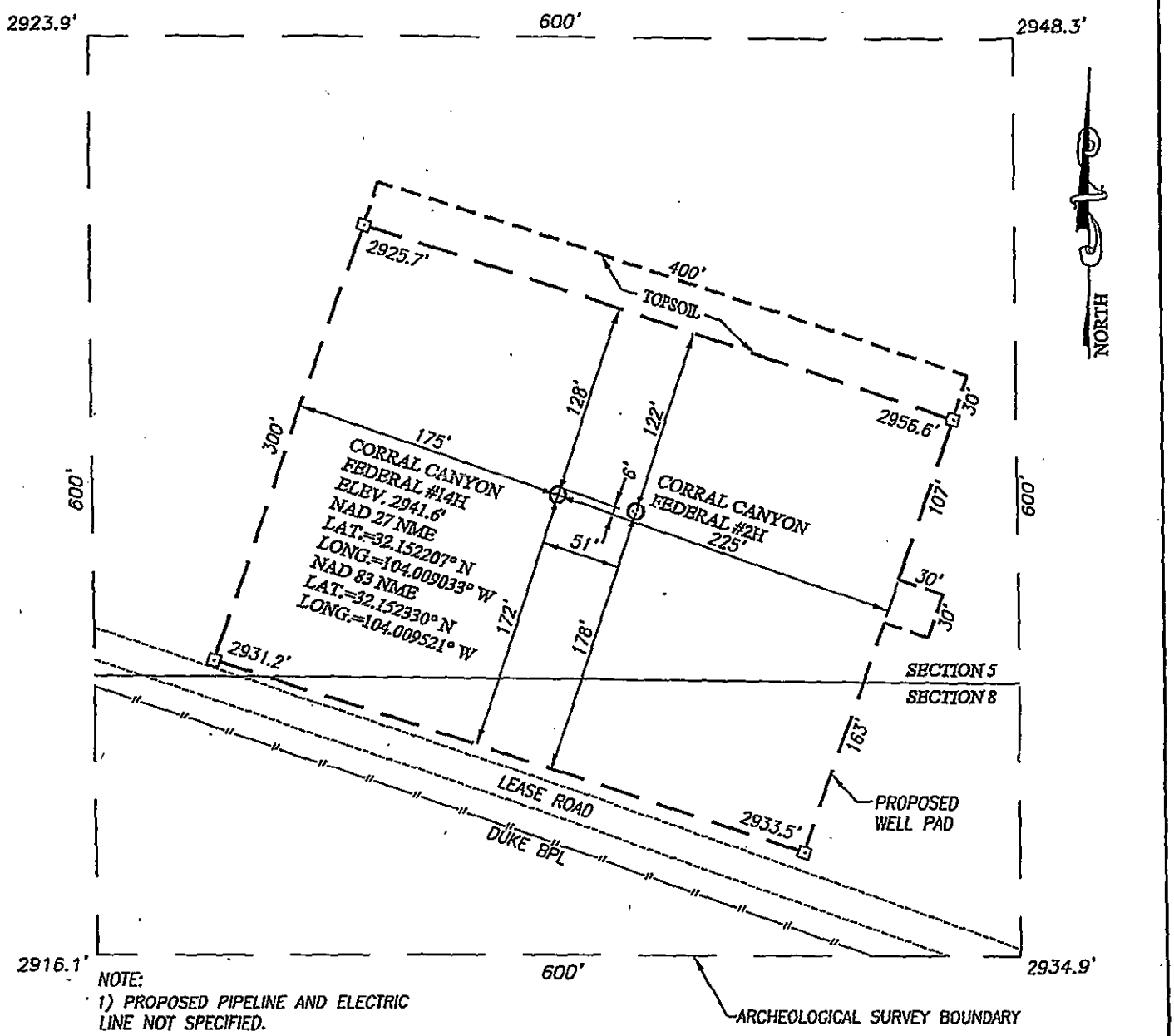
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #13H WELL
LOCATED 190 FEET FROM THE SOUTH LINE
AND 520 FEET FROM THE EAST LINE OF SECTION 6,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 4/2/14	CAD Date: 5/16/14	Drawn By: ACK
W.O. No.: 14110215	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #2H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH–NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND GO SOUTHWEST APPROX. 0.25 MILES. TURN RIGHT AND GO NORTHWEST APPROX. 0.5 MILES. THE LOCATION STAKE IS APPROX. 200 FEET NORTH.

100 0 100 200 Feet

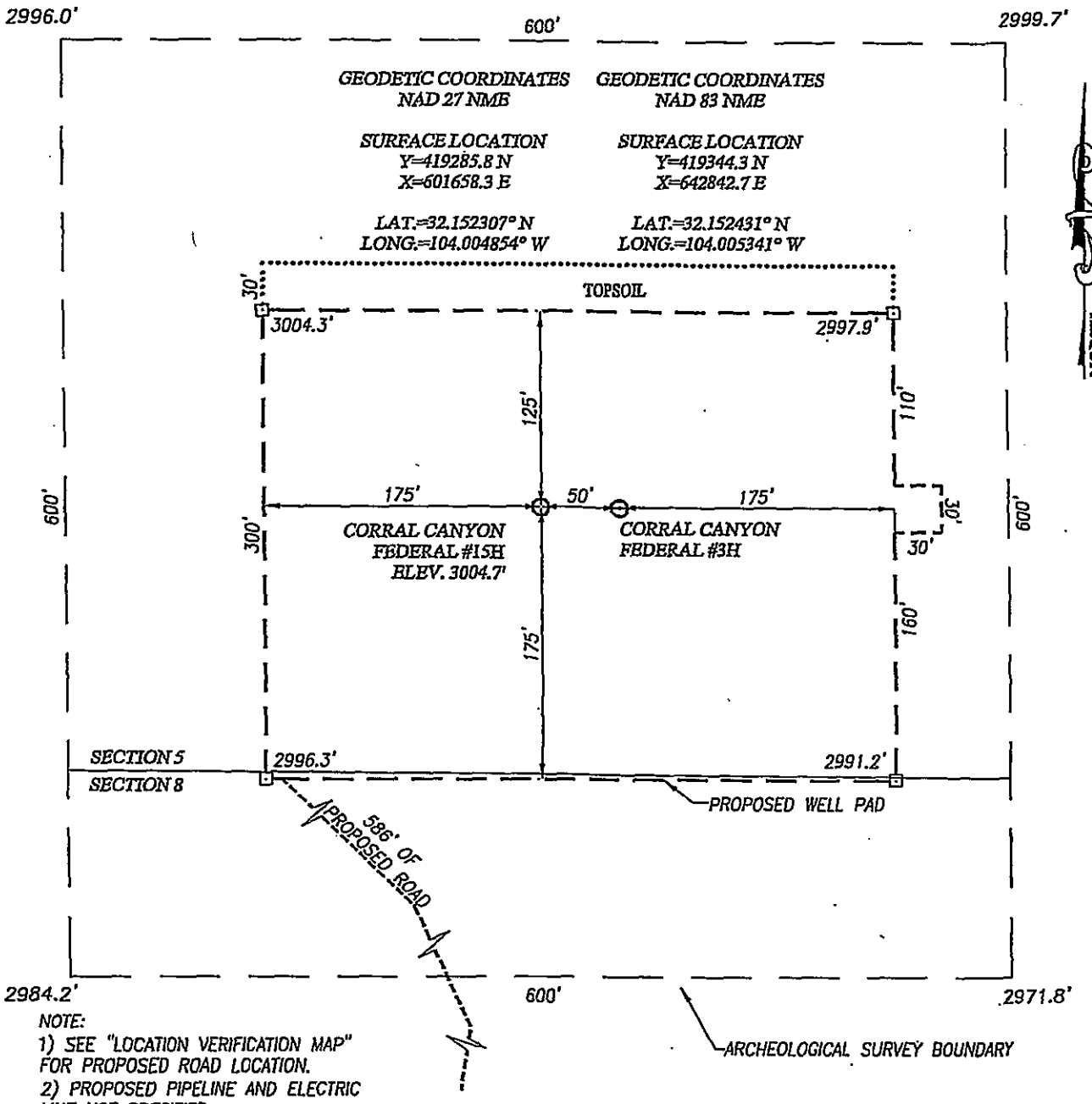
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #14H WELL
LOCATED 120 FEET FROM THE SOUTH LINE
AND 1760 FEET FROM THE WEST LINE OF SECTION 5,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 03/06/14	CAD Date: 03/26/14	Drawn By: DSS
W.O. No.: 14110217	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.
2) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #15H:

FROM THE INTERSECTION OF U.S. HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD), GO NORTHEAST ALONG CO. RD. 725 APPROX. 4.2 MILES PASS THE PECOS RIVER AND TO A "Y" INTERSECTION; TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES; TURN LEFT AND GO NORTH-NORTHWESTERY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND GO SOUTHWEST APPROX. 0.5 MILES TO A PROPOSED SURVEY. FOLLOW ROAD SURVEY NORTHWEST APPROX. 586 FEET. THIS LOCATION IS NORTHWEST APPROX. 240 FEET.

100 0 100 200 Feet

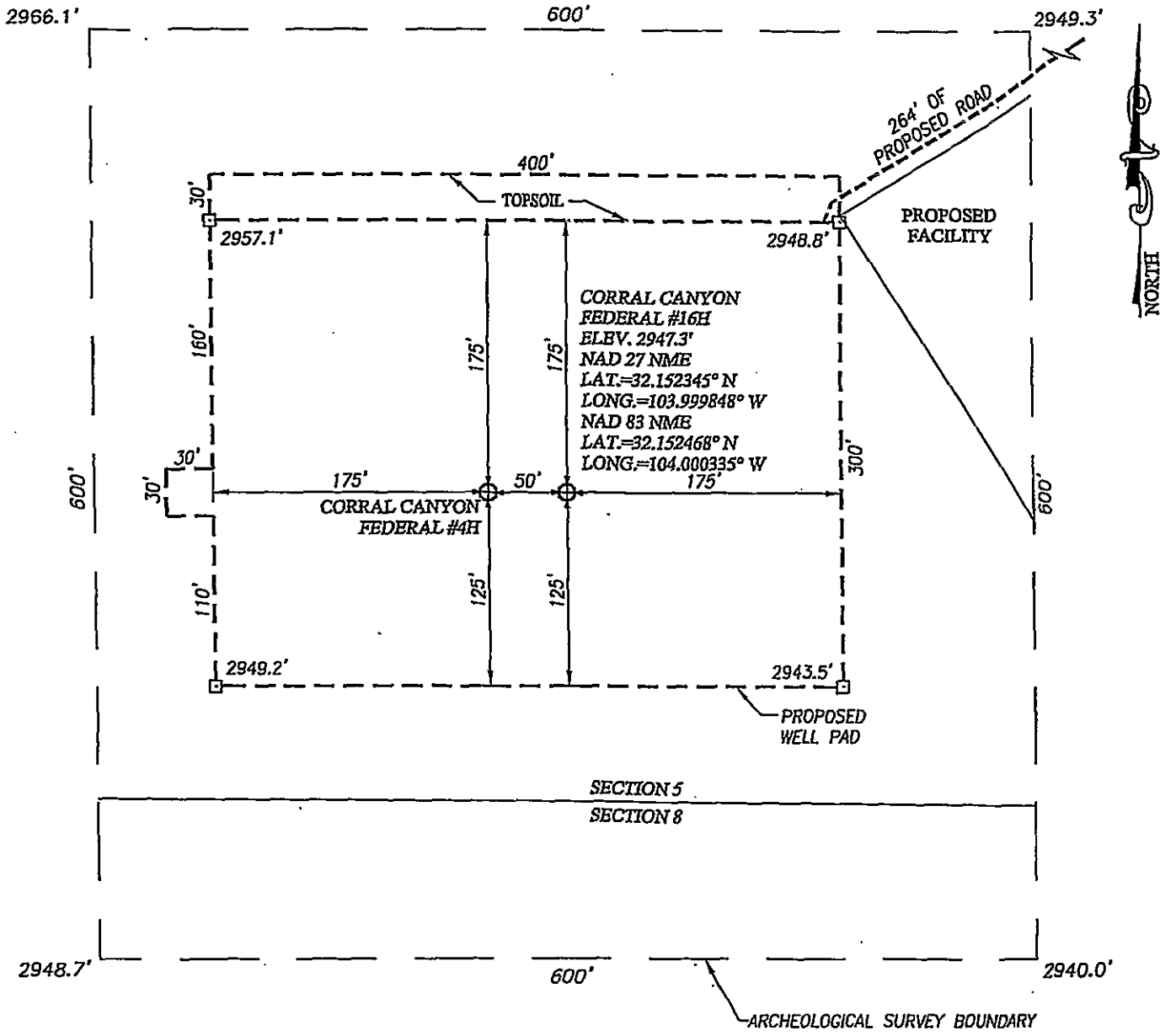
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #15H WELL
LOCATED 170 FEET FROM THE SOUTH LINE
AND 2260 FEET FROM THE EAST LINE OF SECTION 5,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 3/5/14	CAD Date: 3/28/14	Drawn By: ACK
W.O. No.: 14110219	Rev: .	Rel. W.O.:	Sheet 1 of 1



DIRECTIONS TO CORRAL CANYON FEDERAL #16H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. VEER LEFT AND GO NORTH-NORTHWEST APPROX. 1.5 MILES TO PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY STAKES SOUTHWEST APPROX. 264 FEET TO THE NORTHEAST CORNER OF PROPOSED WELL PAD. THIS LOCATION STAKE IS APPROX. 240 FEET SOUTHWEST.

NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.
2) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

100 0 100 200 Feet

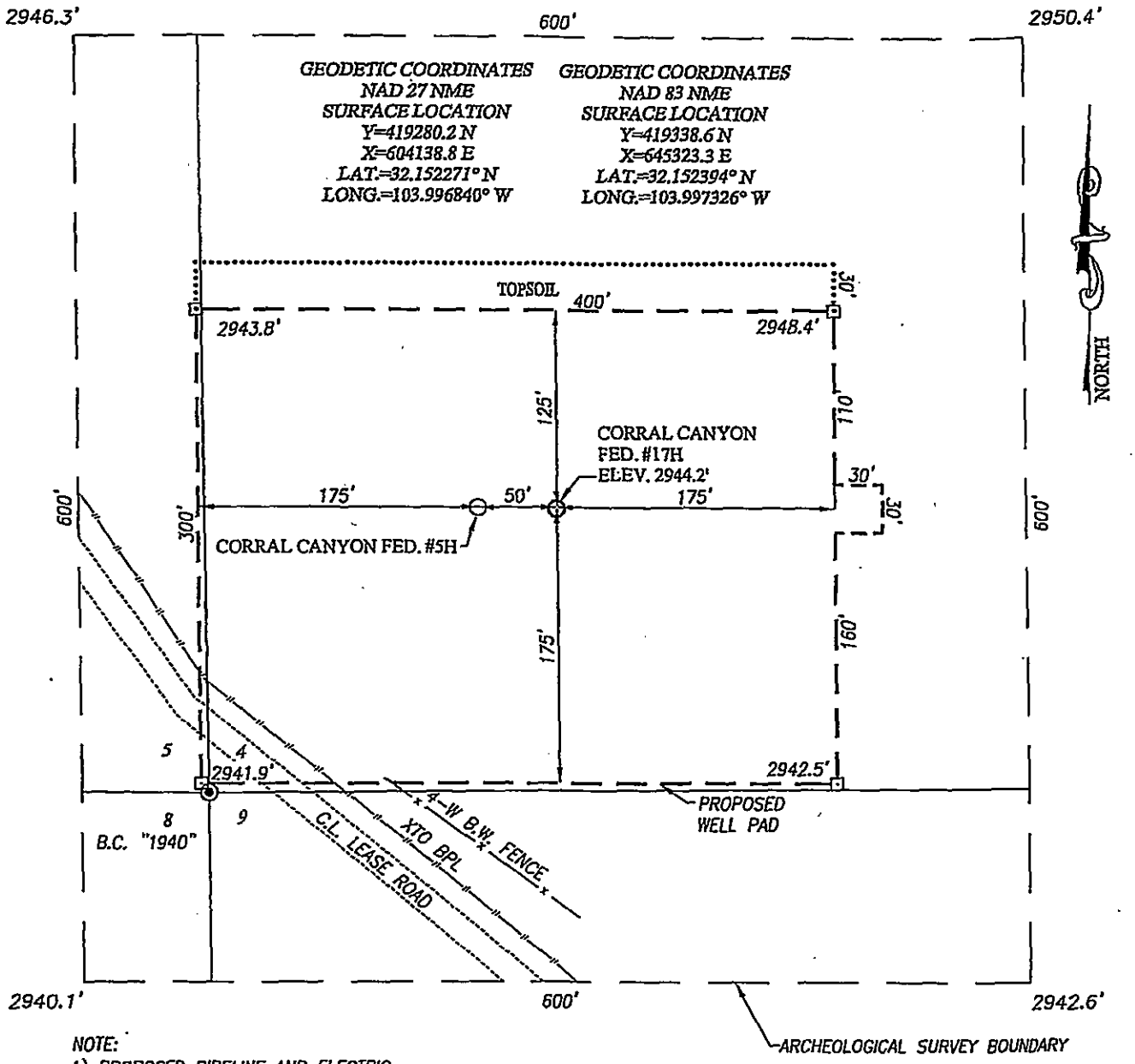
Scale: 1"=100'

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

XTO ENERGY

CORRAL CANYON FEDERAL #16H WELL
LOCATED 200 FEET FROM THE SOUTH LINE
AND 710 FEET FROM THE EAST LINE OF SECTION 5,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 03/05/14	CAD Date: 03/26/14	Drawn By: DSS
W.O. No.: 14110221	Rev: .	Rel. W.O.:	Sheet 1 of 1



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #17H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH--NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 5.0 MILES. TURN LEFT AND GO NORTHWEST APPROX. 300 FEET. THIS LOCATION IS NORTHEAST APPROX. 260 FEET.

100 0 100 200 Feet

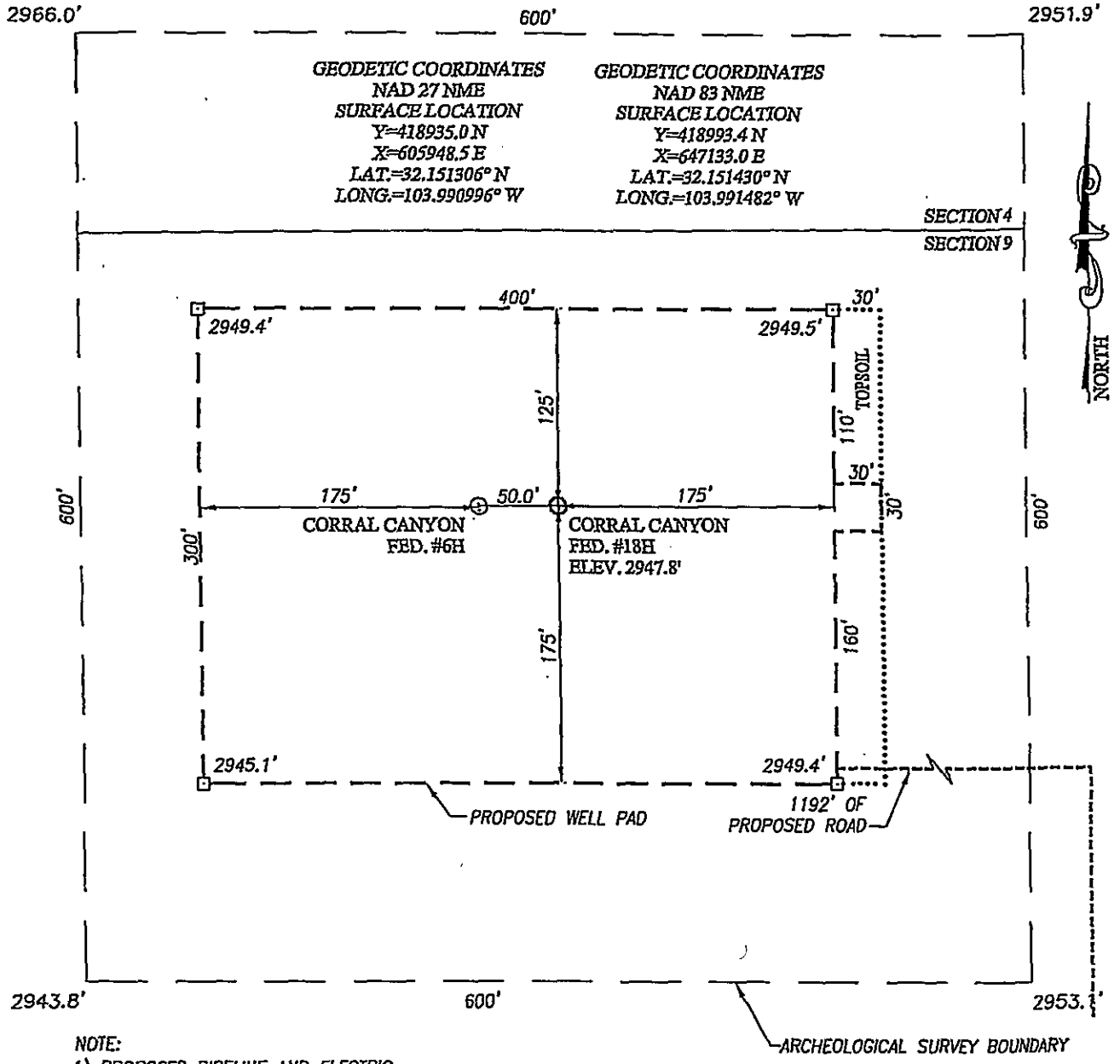
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #17H WELL
LOCATED 180 FEET FROM THE SOUTH LINE
AND 221 FEET FROM THE WEST LINE OF SECTION 4,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 4/4/14	CAD Date: 5/1/14	Drawn By: ACK
W.O. No.: 14110223	Rev: .	Rel. W.O.:	Sheet 1 of 1



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #6H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH–NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 4.8 MILES. TURN RIGHT AND GO EAST APPROX. 0.3 MILES TO PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY NORTH EASTERLY DIRECTION APPROX. 700 FEET; TURN LEFT AND GO NORTHWEST APPROX. 142 FEET; TURN RIGHT AND GO NORTH APPROX. 185 FEET; TURN LEFT AND GO WEST APPROX. 165 FEET TO THE SOUTHEAST CORNER PROPOSED WELL PAD. THIS LOCATION IS NORTHWEST APPROX. 240 FEET.

100 0 100 200 Feet

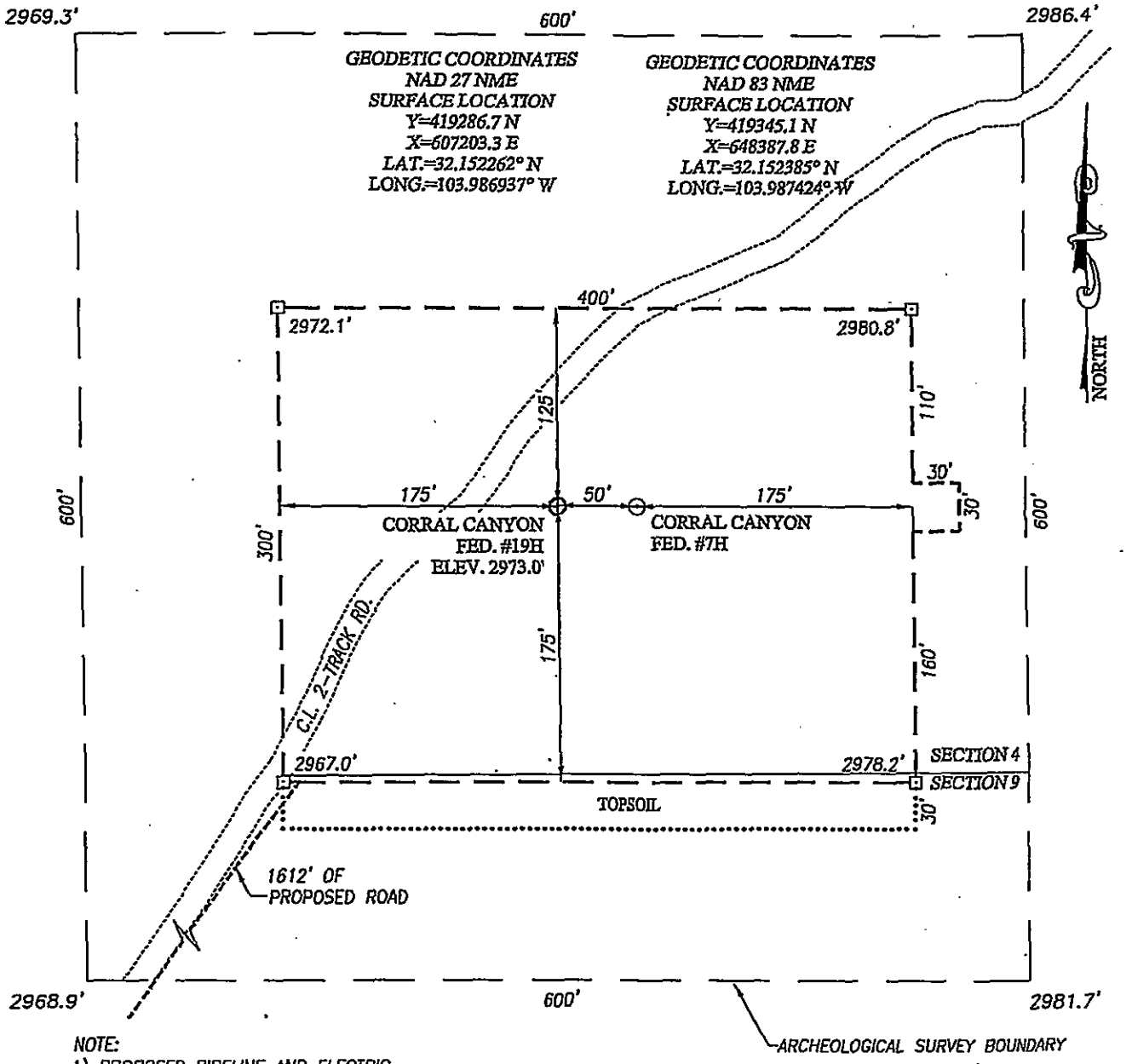
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #18H WELL
LOCATED 175 FEET FROM THE NORTH LINE
AND 2030 FEET FROM THE WEST LINE OF SECTION 9,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 4/7/14	CAD Date: 5/2/14	Drawn By: ACK
W.O. No.: 14110225	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #19H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH–NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 4.8 MILES. TURN RIGHT AND GO EAST APPROX. 0.3 MILES TO PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY NORTHEASTERLY DIRECTION APPROX. 1605 FEET TO THE SOUTHWEST CORNER PROPOSED WELL PAD. THIS LOCATION IS NORTH APPROX. 240 FEET.

100 0 100 200 Feet

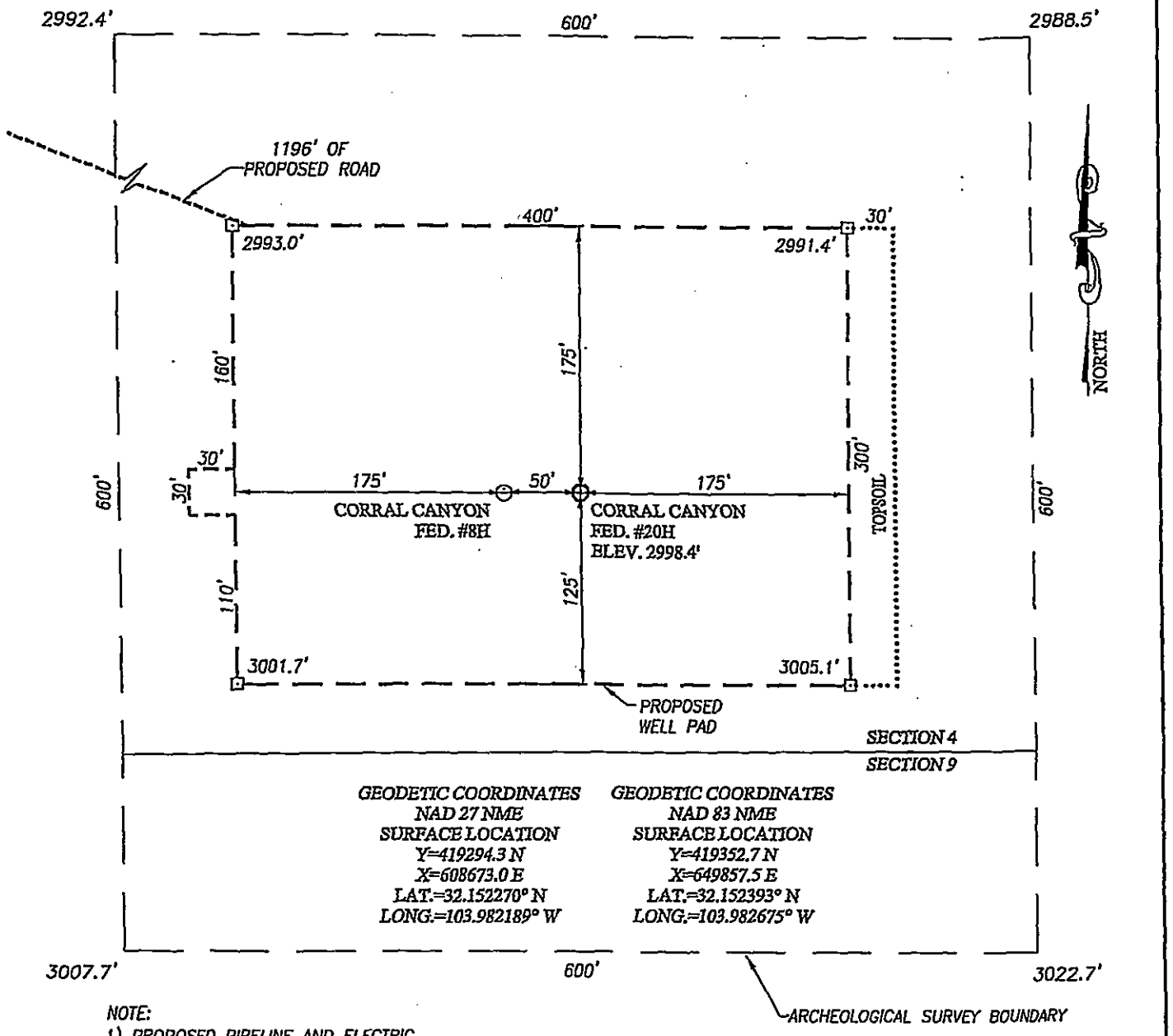
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #19H: WELL
LOCATED 170 FEET FROM THE SOUTH LINE
AND 2030 FEET FROM THE EAST LINE OF SECTION 4,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 4/8/14	CAD Date: 5/1/14	Drawn By: ACK
W.O. No.: 14110227	Rev: .	Rel. W.O.:	Sheet 1 of 1



NOTE:
1) PROPOSED PIPELINE AND ELECTRIC LINE NOT SPECIFIED.

DIRECTIONS TO CORRAL CANYON FEDERAL #20H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 4.8 MILES. TURN RIGHT AND GO EAST APPROX. 0.3 MILES TO PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY NORTHEAST APPROX. 1612 FEET TO THE SOUTHWEST CORNER PROPOSED WELL PAD FOR THE CORRAL CANYON FEDERAL #7H AND #19H. AT THE NORTHEAST CORNER OF THIS WELL PAD FOLLOW PROPOSED ROAD NORTH APPROX. 80 FEET, THEN NORTHEAST APPROX. 580 FEET; THEN SOUTHEAST APPROX. 538 FEET TO THE NORTHWEST CORNER PROPOSED WELL PAD FOR THIS WELL PAD. THIS WELL IS SOUTHEAST APPROX. 277 FEET.

100 0 100 200 Feet

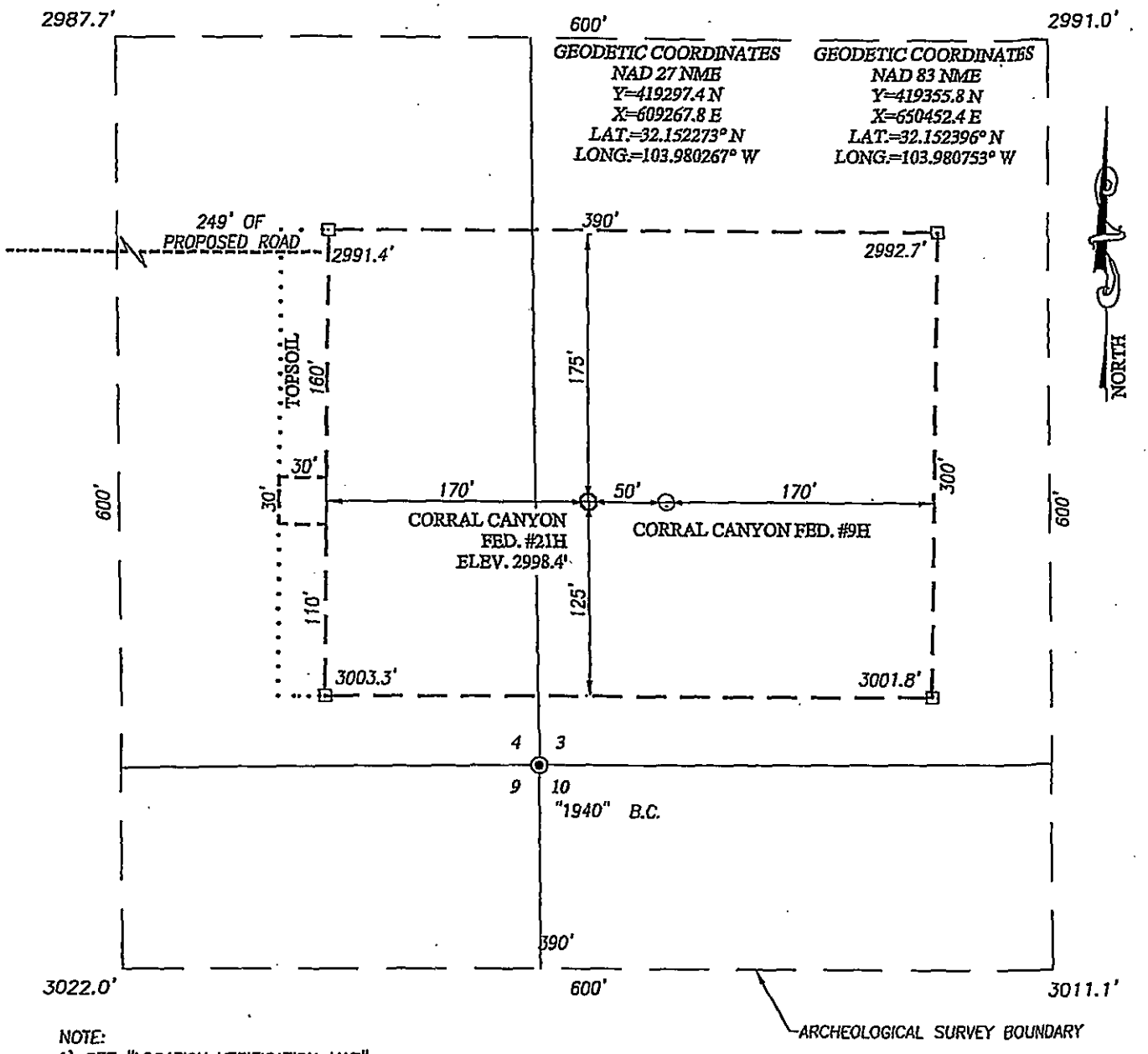
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #20H WELL
LOCATED 170 FEET FROM THE SOUTH LINE
AND 560 FEET FROM THE EAST LINE OF SECTION 4,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 4/9/14	CAD Date: 5/2/14	Drawn By: ACK
W.O. No.: 14110229	Rev: .	Rel. W.O.:	Sheet 1 of 1

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO CORRAL CANYON FEDERAL #21H:

FROM THE INTERSECTION OF HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 3.4 MILES. STAY ON WINDING ROAD AND GO NORTH-NORTHEAST APPROX. 1.4 MILES. TURN LEFT AND GO NORTH APPROX. 0.7 MILES. TURN LEFT AND GO WEST FOLLOWING WINDING ROAD APPROX. 1.0 MILE TO A ROAD SURVEY. FOLLOW ROAD SURVEY STAKES 249 FEET EAST TO THE LOCATION.

100 0 100 200 Feet

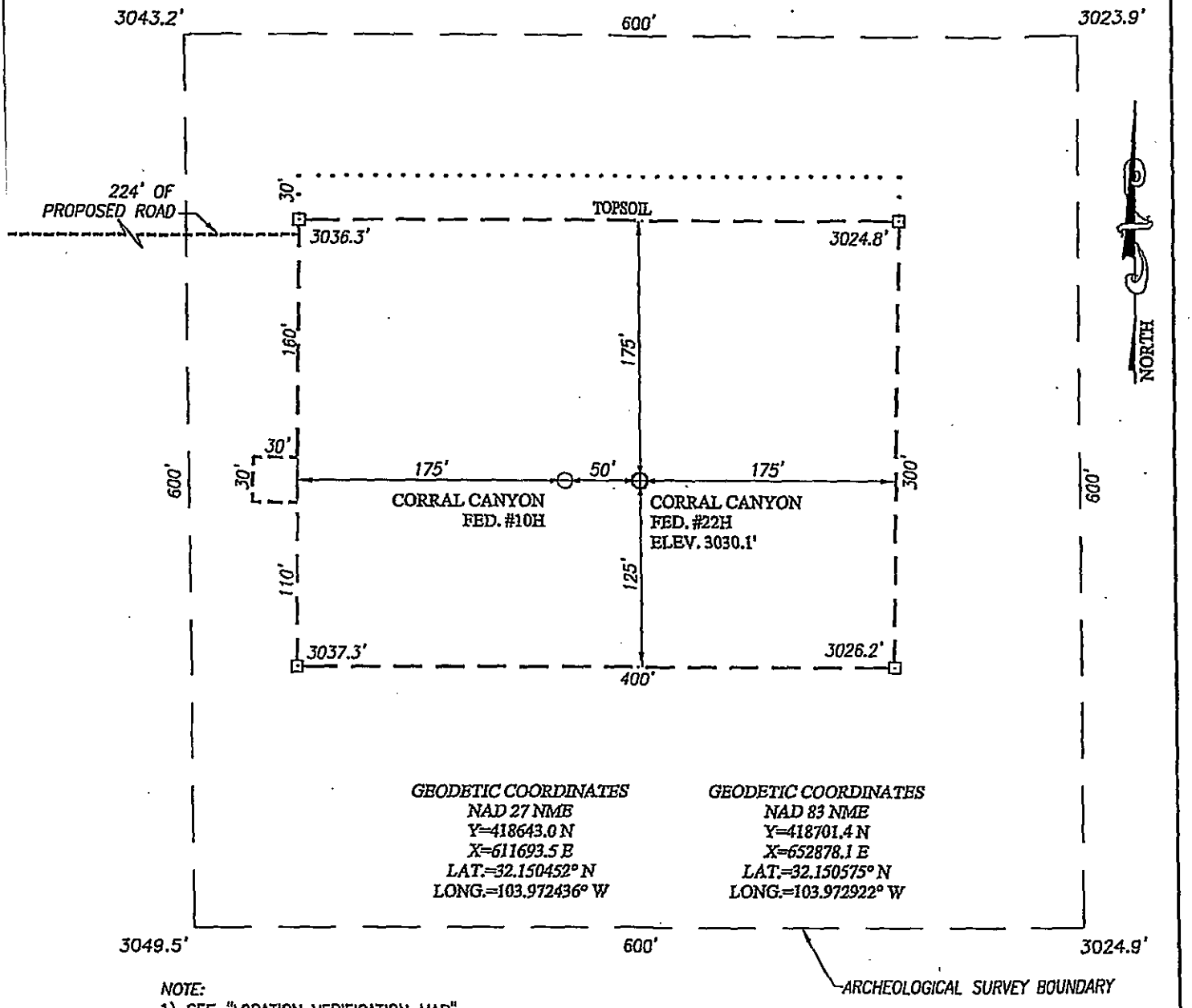
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #21H WELL
LOCATED 170 FEET FROM THE SOUTH LINE
AND 34 FEET FROM THE WEST LINE OF SECTION 3,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 4/28/14	CAD Date: 5/19/14	Drawn By: ACK
W.O. No.: 14110431	Rev: .	Rel. W.O.:	Sheet 1 of 1



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO CORRAL CANYON FEDERAL #22H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 3.4 MILES. STAY ON WINDING ROAD AND GO NORTH-NORTHEAST APPROX. 1.4 MILES. TURN LEFT AND GO NORTH APPROX. 0.7 MILES. TURN LEFT AND GO WEST FOLLOWING WINDING ROAD APPROX. 0.5 MILES TO A ROAD SURVEY. FOLLOW ROAD SURVEY STAKES 225 FEET EAST TO THE LOCATION.

100 0 100 200 Feet

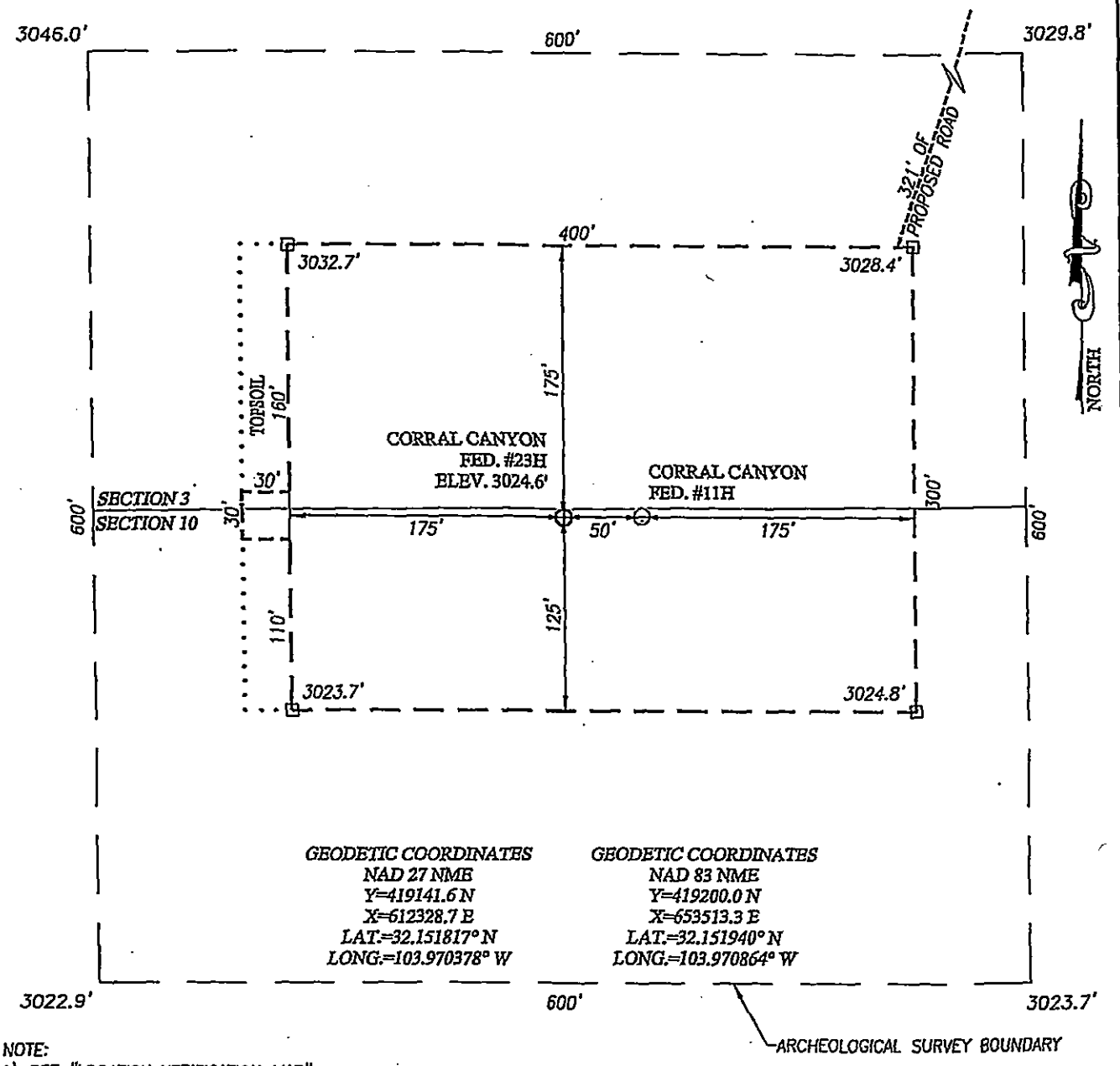
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #22H WELL
LOCATED 500 FEET FROM THE NORTH LINE
AND 2460 FEET FROM THE WEST LINE OF SECTION 10,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 4/29/14	CAD Date: 5/20/14	Drawn By: ACK
W.O. No.: 14110433	Rev: .	Rel. W.O.:	Sheet 1 of 1



NOTE:
1) SEE "LOCATION VERIFICATION MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO CORRAL CANYON FEDERAL #23H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 3.4 MILES. STAY ON WINDING ROAD AND GO NORTH-NORTHEAST APPROX. 1.4 MILES. TURN LEFT AND GO NORTH APPROX. 0.7 MILES. TURN LEFT AND GO WEST FOLLOWING WINDING ROAD APPROX. 0.1 MILE TO A ROAD SURVEY. FOLLOW ROAD SURVEY STAKES 321 FEET SOUTH TO THE LOCATION.

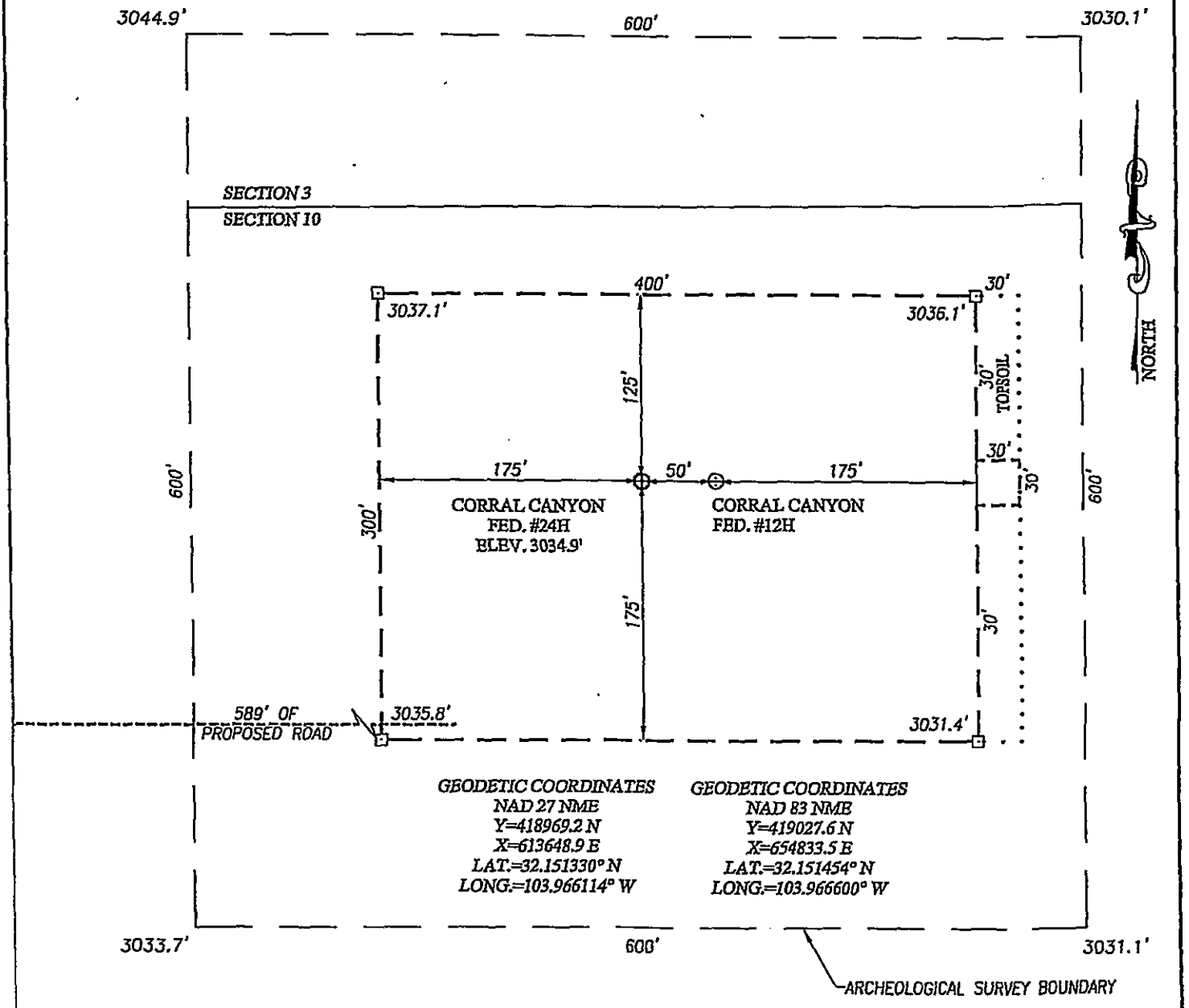
100 0 100 200 Feet
Scale: 1"=100'

XTO ENERGY

CORRAL CANYON FEDERAL #23H WELL
LOCATED 5 FEET FROM THE NORTH LINE
AND 2205 FEET FROM THE EAST LINE OF SECTION 10,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 5/5/14	CAD Date: 5/20/14	Drawn By: ACK
W.O. No.: 14110435	Rev: .	Rel. W.O.:	Sheet 1 of 1



DIRECTIONS TO CORRAL CANYON FEDERAL #24H:

FROM THE INTERSECTION OF US HIGHWAY 285 (PECOS HWY.) AND CO. RD. 725 (LONGHORN ROAD),GO NORTHEAST ON CO. RD. 725 APPROX. 4.2 MILES. PASS THE PECOS RIVER AND GO TO A "Y" INTERSECTION. TURN LEFT AND GO NORTHEAST APPROX. 1.8 MILES. TURN LEFT AND GO NORTH-NORTHWESTERLY ALONG MEANDERING ROAD APPROX. 3.4 MILES. STAY ON WINDING ROAD AND GO NORTH-NORTHEAST APPROX. 1.4 MILES. TURN LEFT AND GO NORTH APPROX. 0.5 MILES TO A ROAD SURVEY. FOLLOW ROAD SURVEY STAKES 589 FEET SOUTH TO THE LOCATION.

100 0 100 200 Feet

Scale: 1"=100'

XTO ENERGY

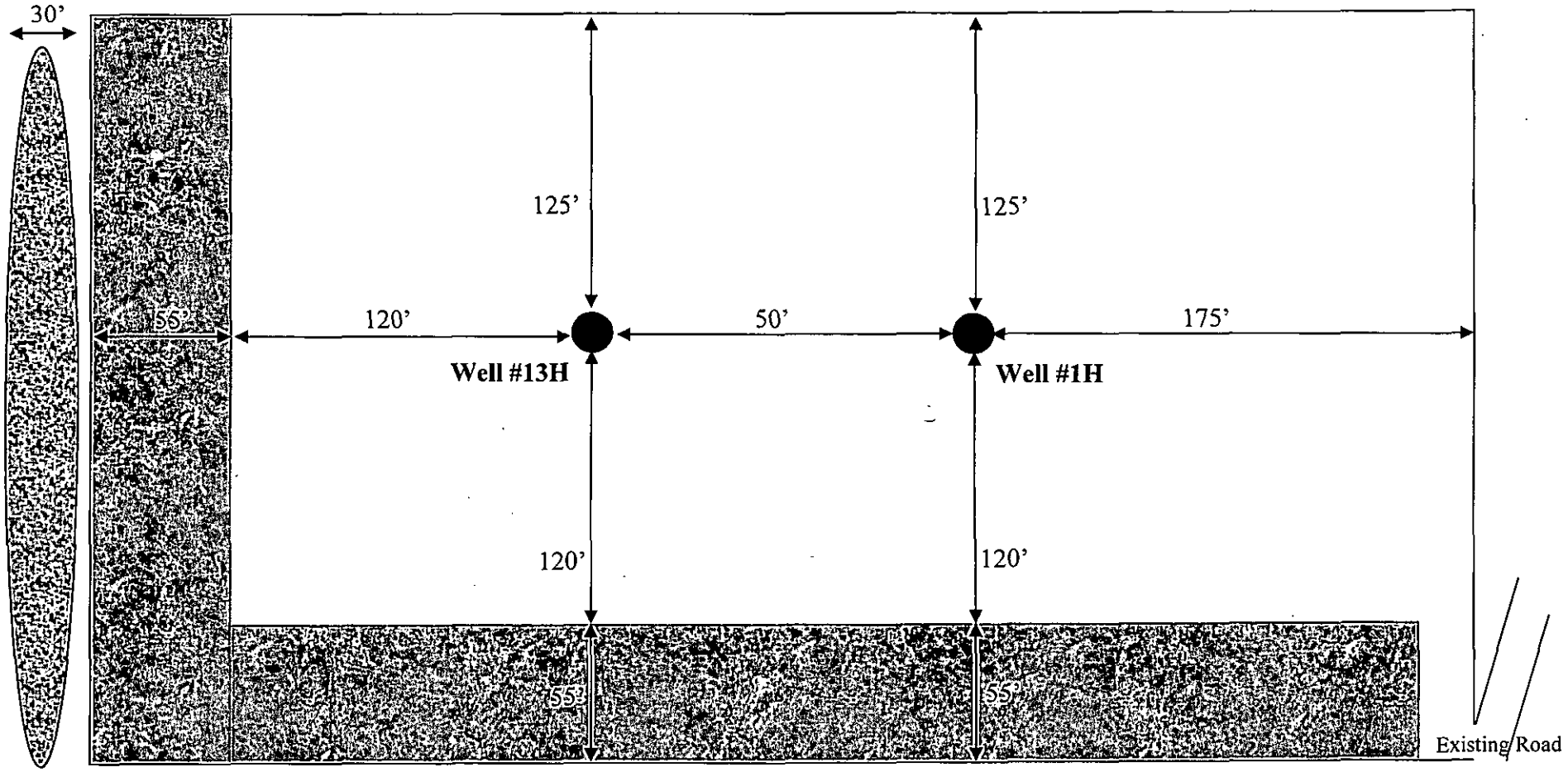
CORRAL CANYON FEDERAL #24H WELL
LOCATED 185 FEET FROM THE NORTH LINE
AND 885 FEET FROM THE EAST LINE OF SECTION 10,
TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 5/2/14	CAD Date: 5/20/14	Drawn By: ACK
W.O. No.: 14110437	Rev: .	Rel. W.O.:	Sheet 1 of 1

EXHIBIT H F.1

Interim Reclamation Diagram
Corral Canyon Fed Com #1H & #13H
V-Door East (Both Wells)



N

LEGEND

Wellbore

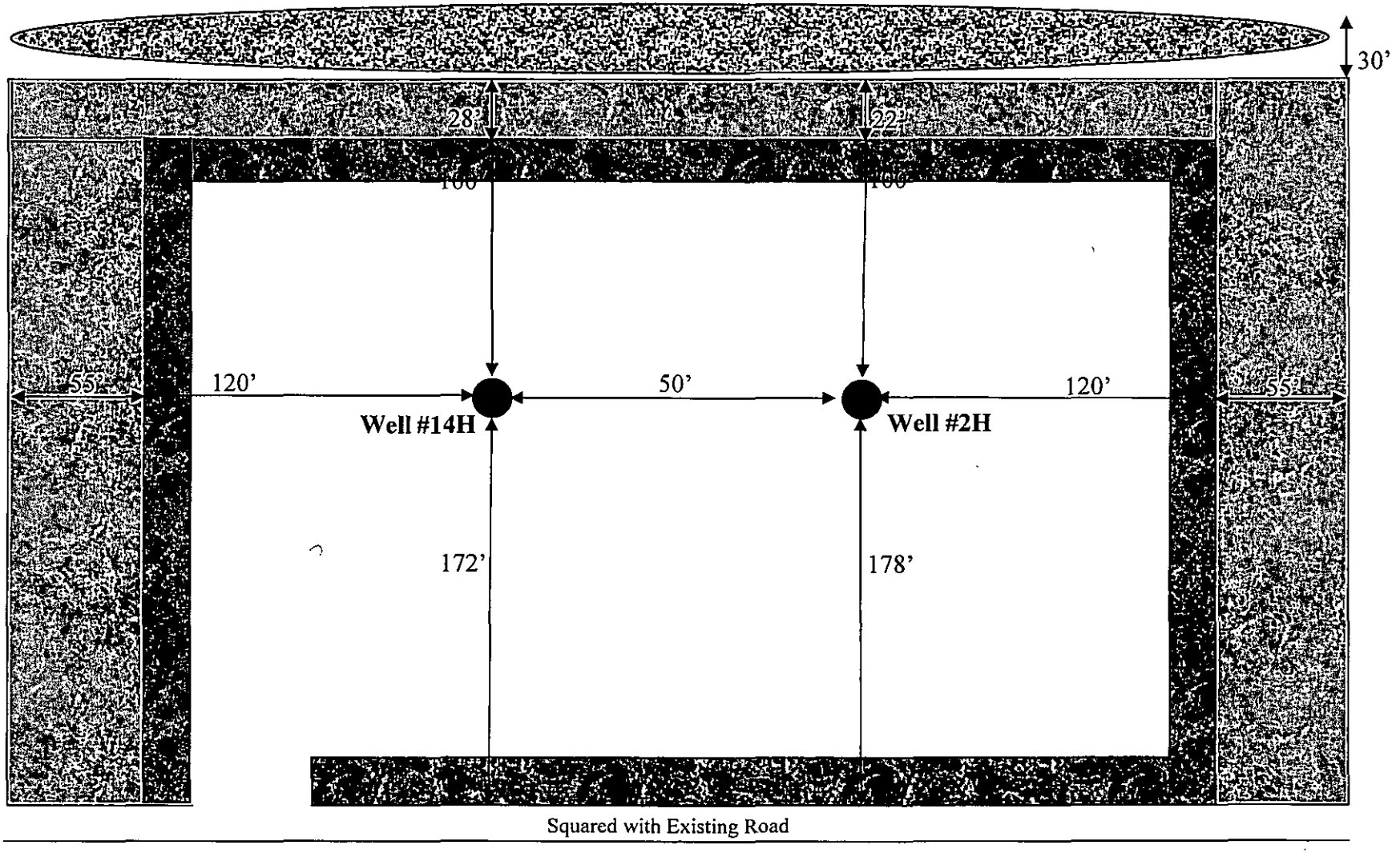
Interim Reclamation

Ditch & Berm

Topsoil

EXHIBIT H F.2

Interim Reclamation Diagram
Corral Canyon Fed Com #2H & #14H
V-Door East (Both Wells)



N

LEGEND

Wellbore

Interim Reclamation

Ditch & Berm

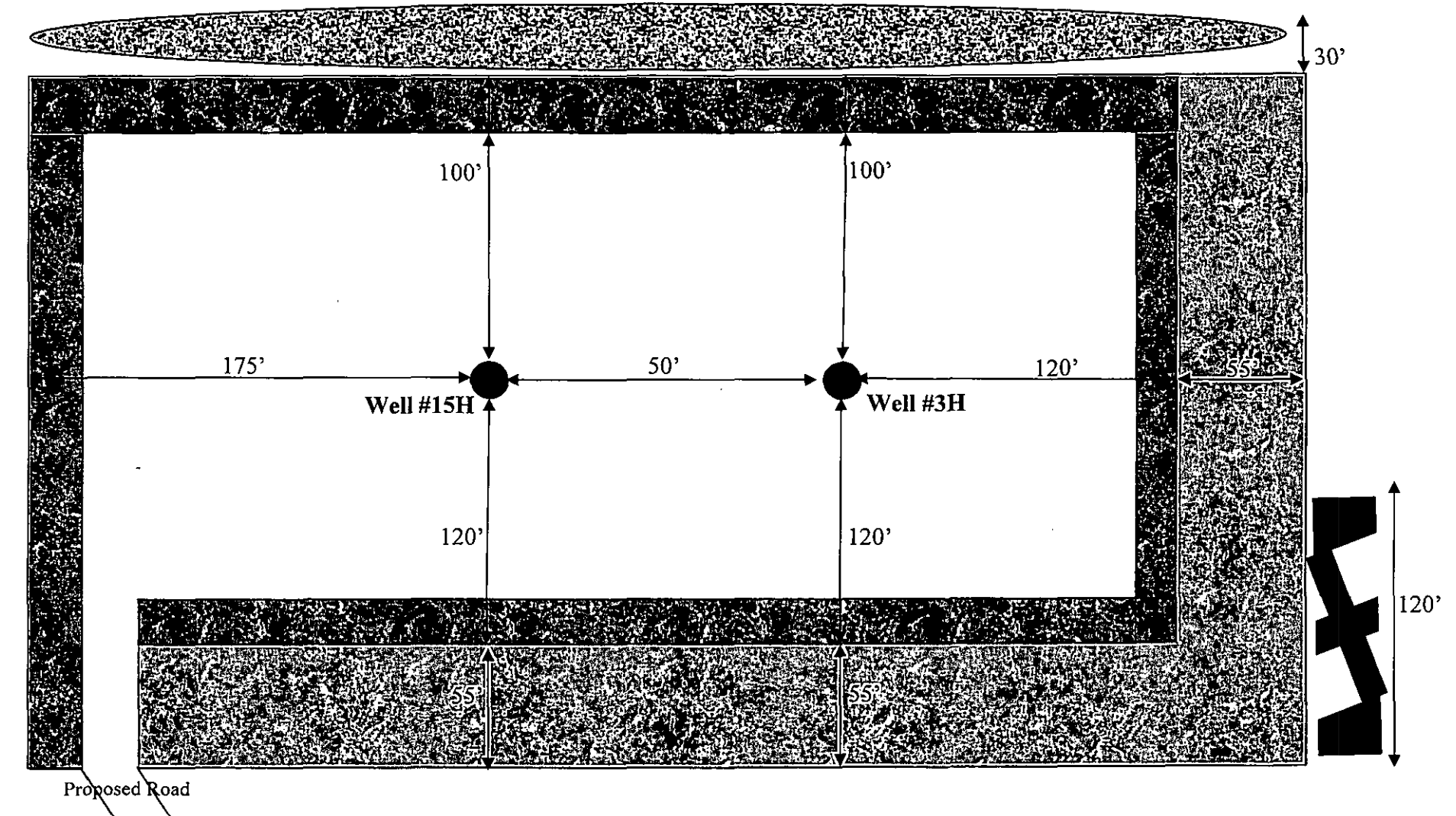
Topsoil

EXHIBIT H F.3

Interim Reclamation Diagram

Corral Canyon Fed Com #3H & #15H

V-Door East (Both Wells)



LEGEND

Wellbore

Interim Reclamation

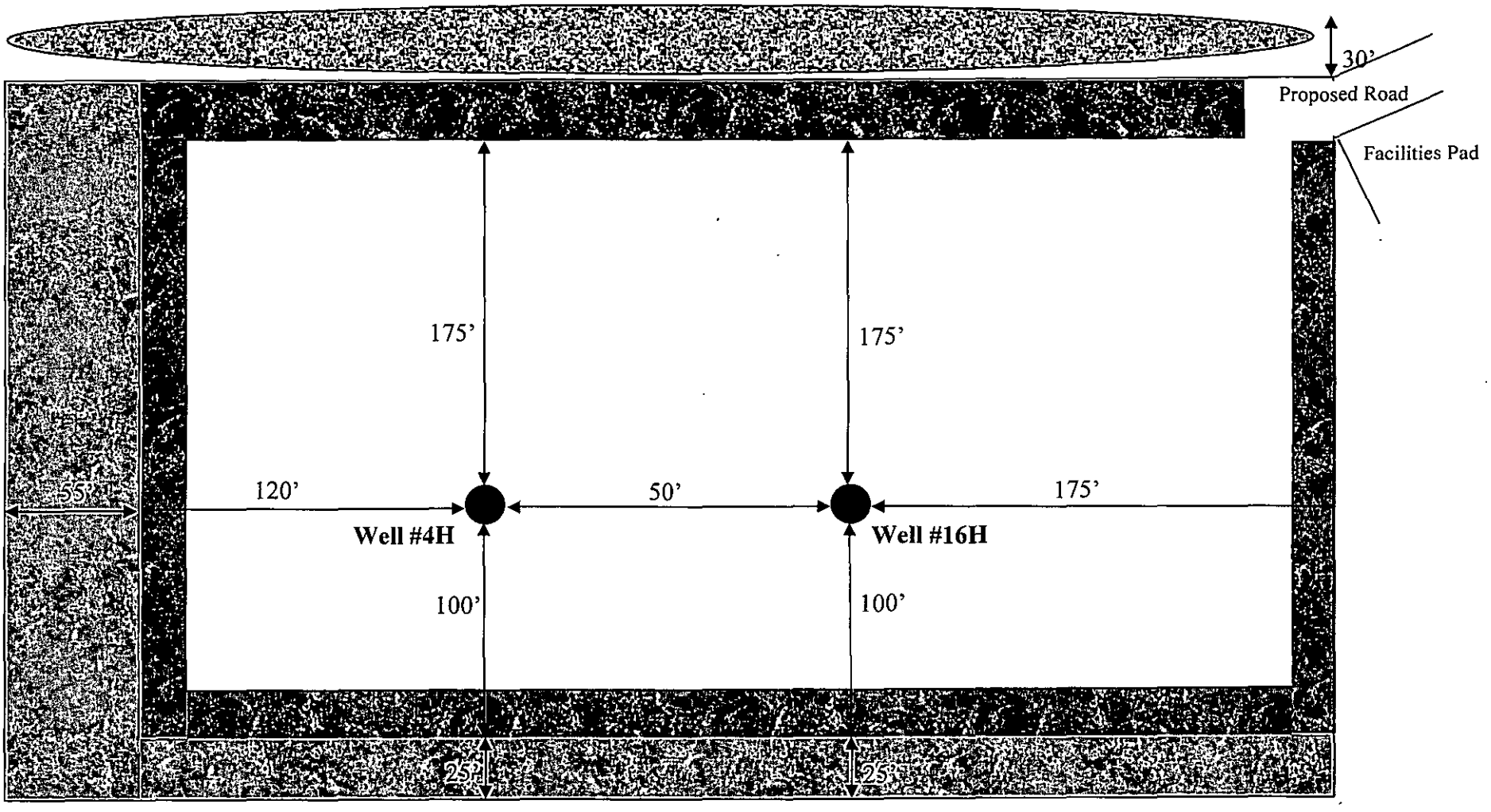
Ditch & Berm

Topsoil

Proposed 3-Strand Fence

EXHIBIT H F.4

Interim Reclamation Diagram
Corral Canyon Fed Com #4H & #16H
V-Door West (Both Wells)



N

LEGEND

Wellbore

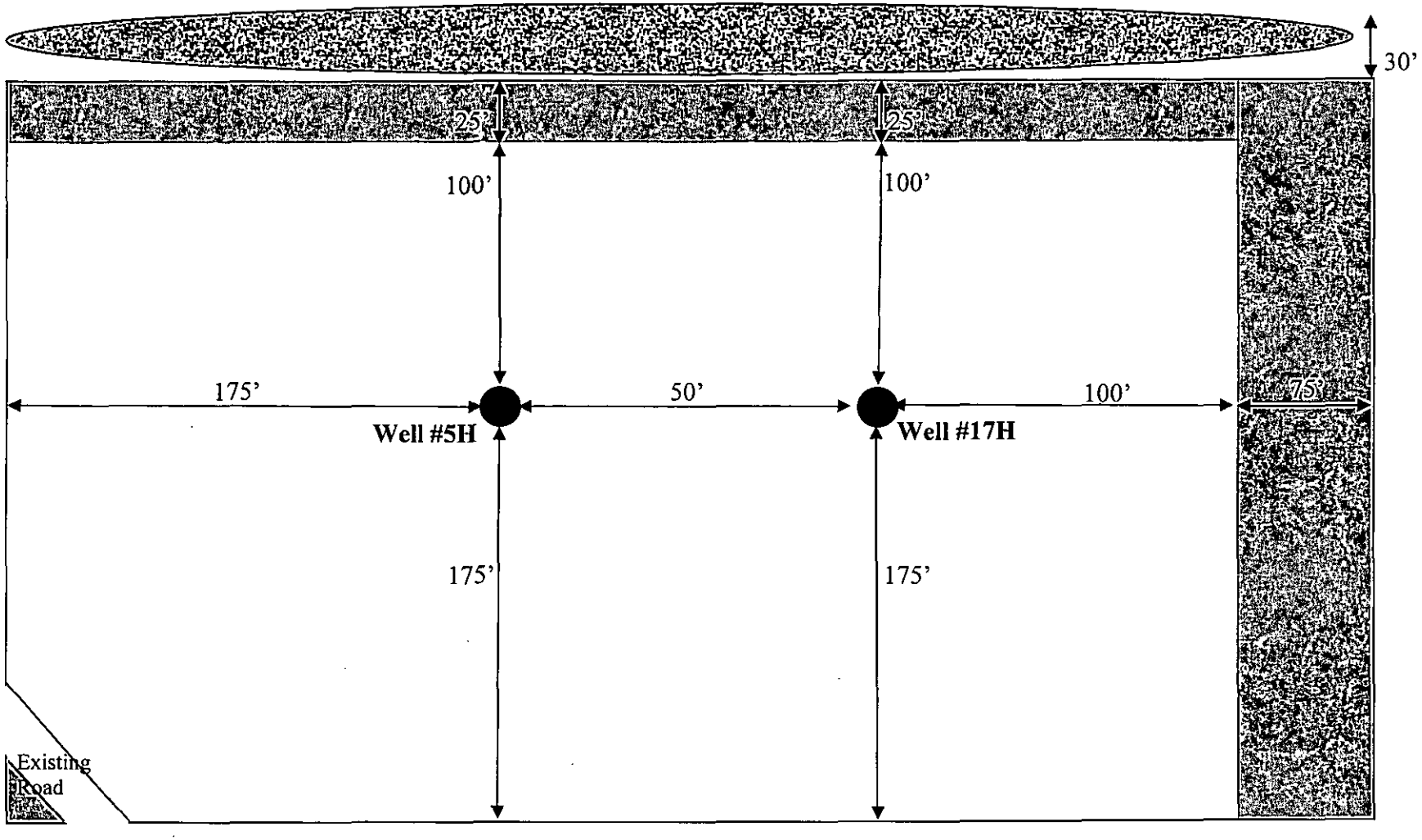
Interim Reclamation

Ditch & Berm

Topsoil

EXHIBIT H F.5

Interim Reclamation Diagram
Corral Canyon Fed Com #5H & #17H
V-Door East (Both Wells)



N

LEGEND

Wellbore

Interim Reclamation

Ditch & Berm

Topsoil

EXHIBIT H F.6

Interim Reclamation Diagram
Corral Canyon Fed Com #6H & #18H
V-Door East (Both Wells)

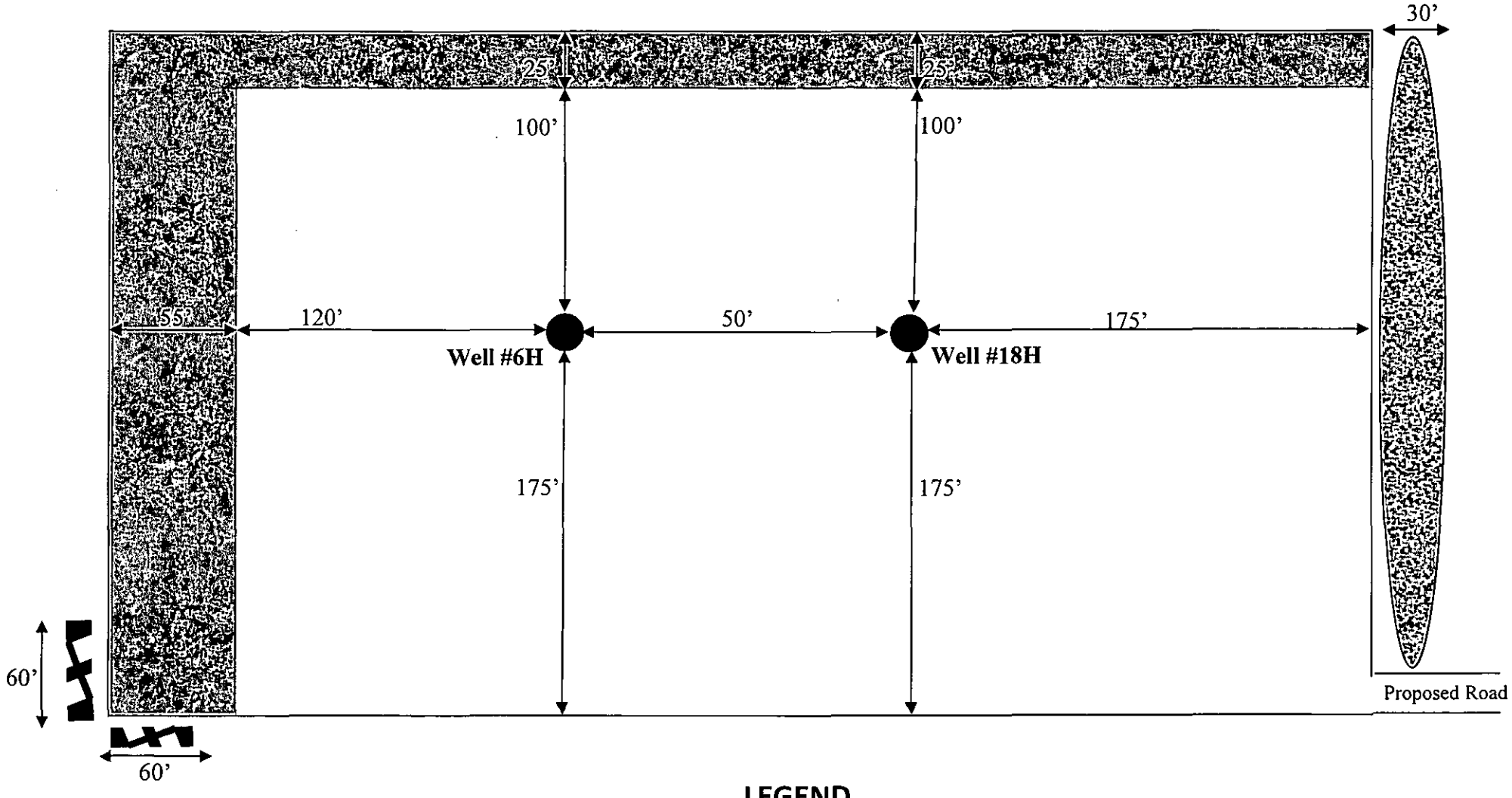


EXHIBIT H F.7

Interim Reclamation Diagram
Corral Canyon Fed Com #7H & #19H
V-Door East (Both Wells)

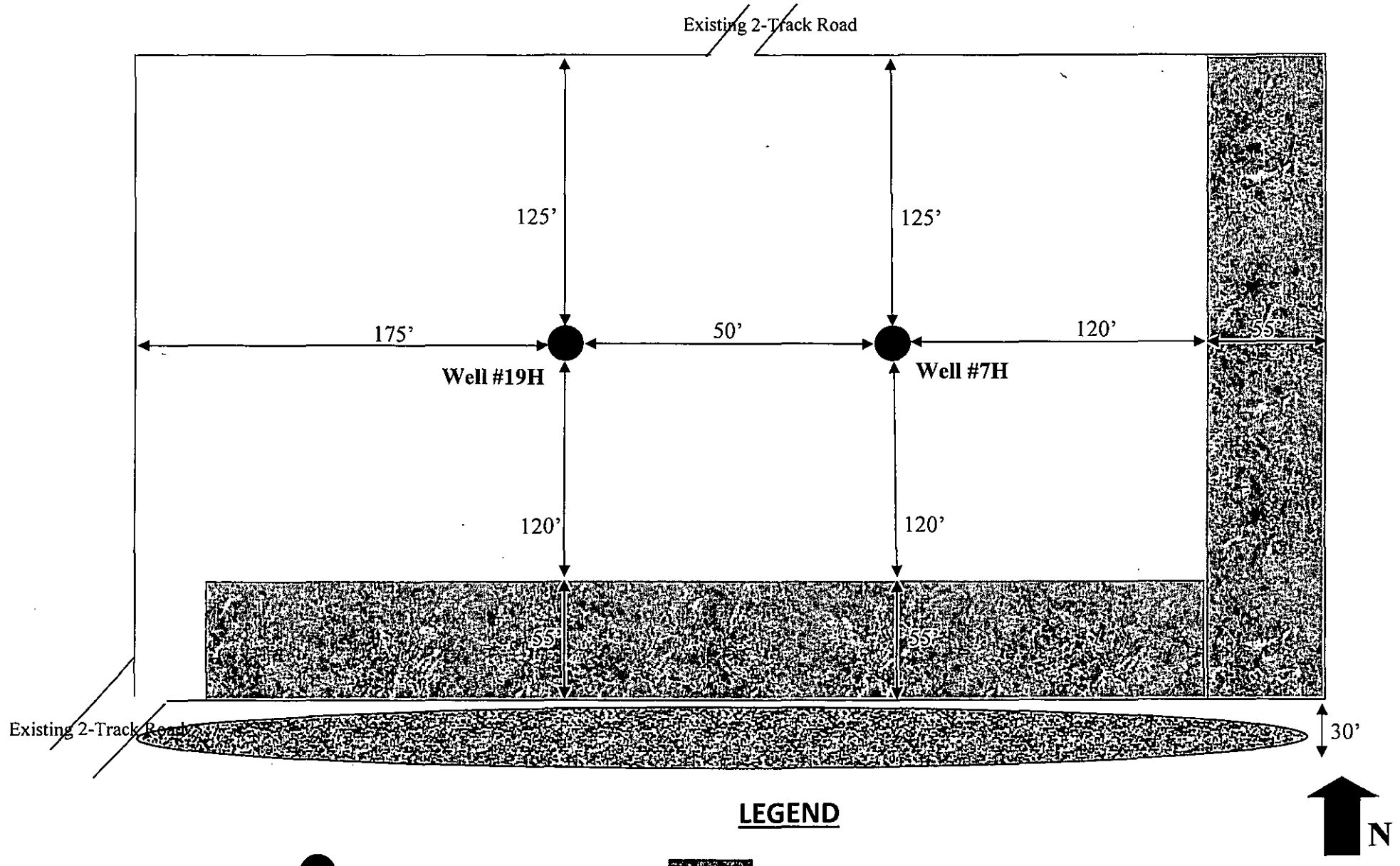
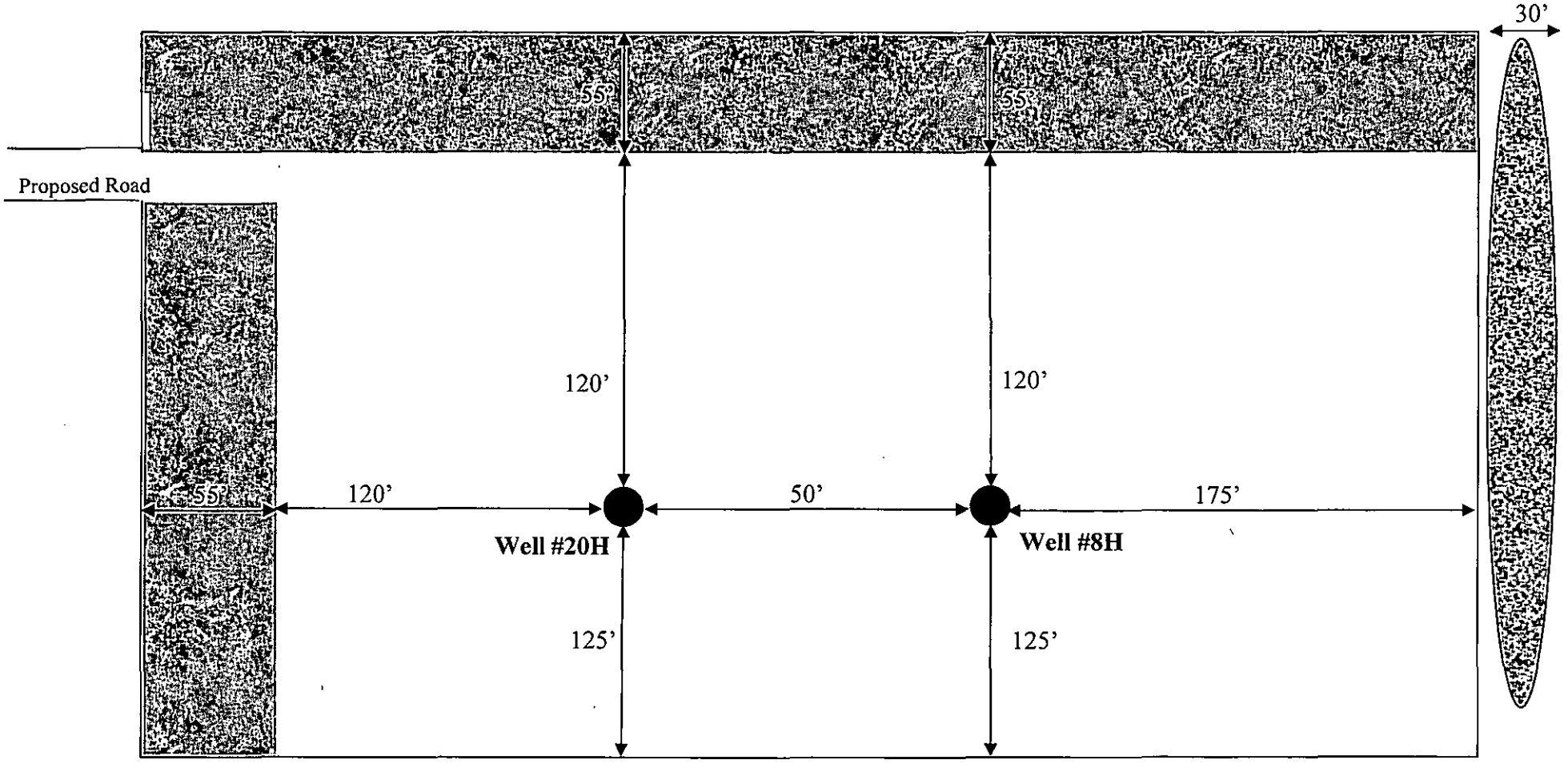


EXHIBIT H F.8

Interim Reclamation Diagram
Corral Canyon Fed Com #8H & #20H
V-Door West (Both Wells)



LEGEND

N

Wellbore

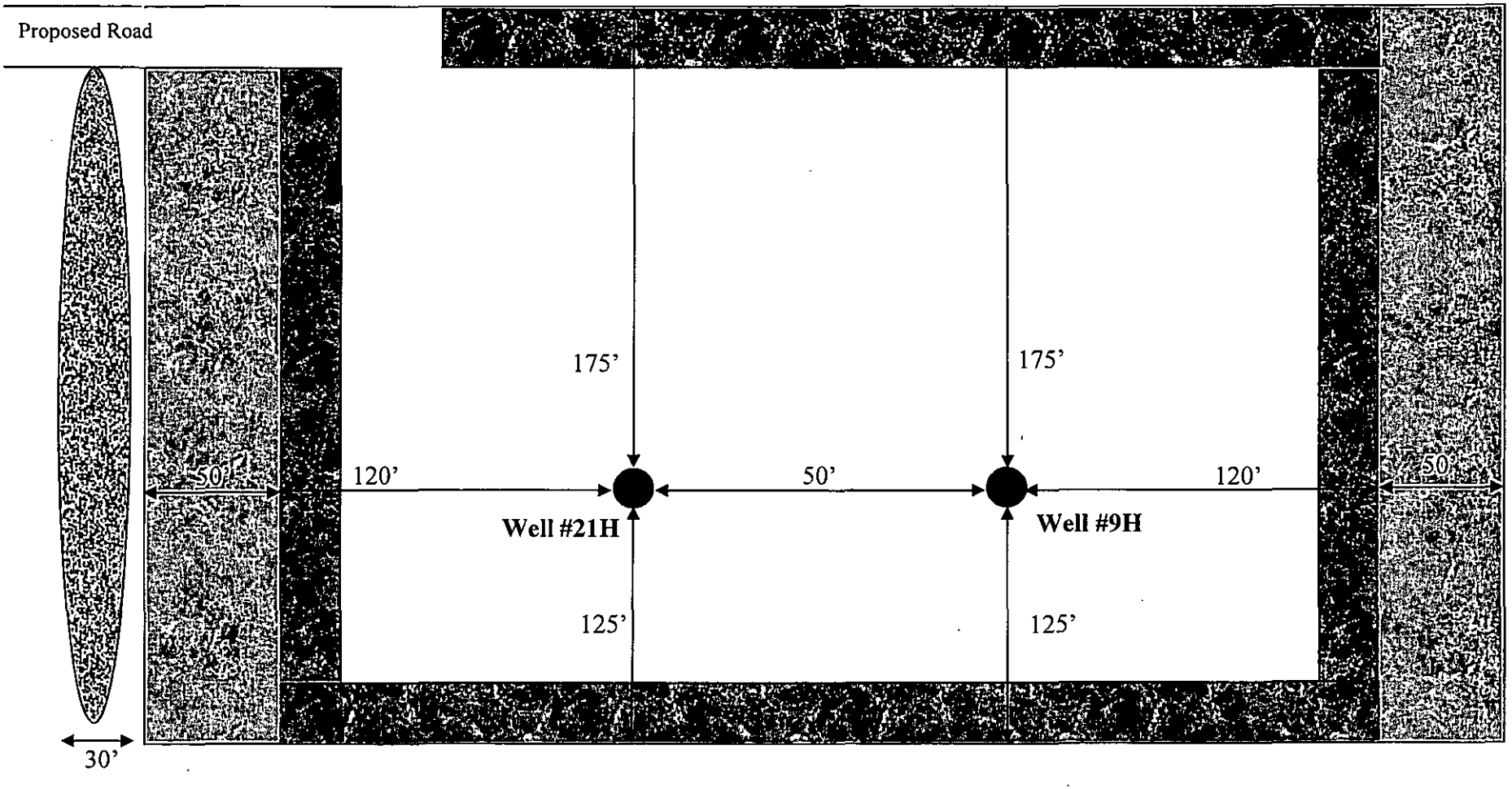
Interim Reclamation

Ditch & Berm

Topsoil

EXHIBIT H F.9

Interim Reclamation Diagram
Corral Canyon Fed Com #9H & #21H
V-Door West (Both Wells)



LEGEND

N

Wellbore

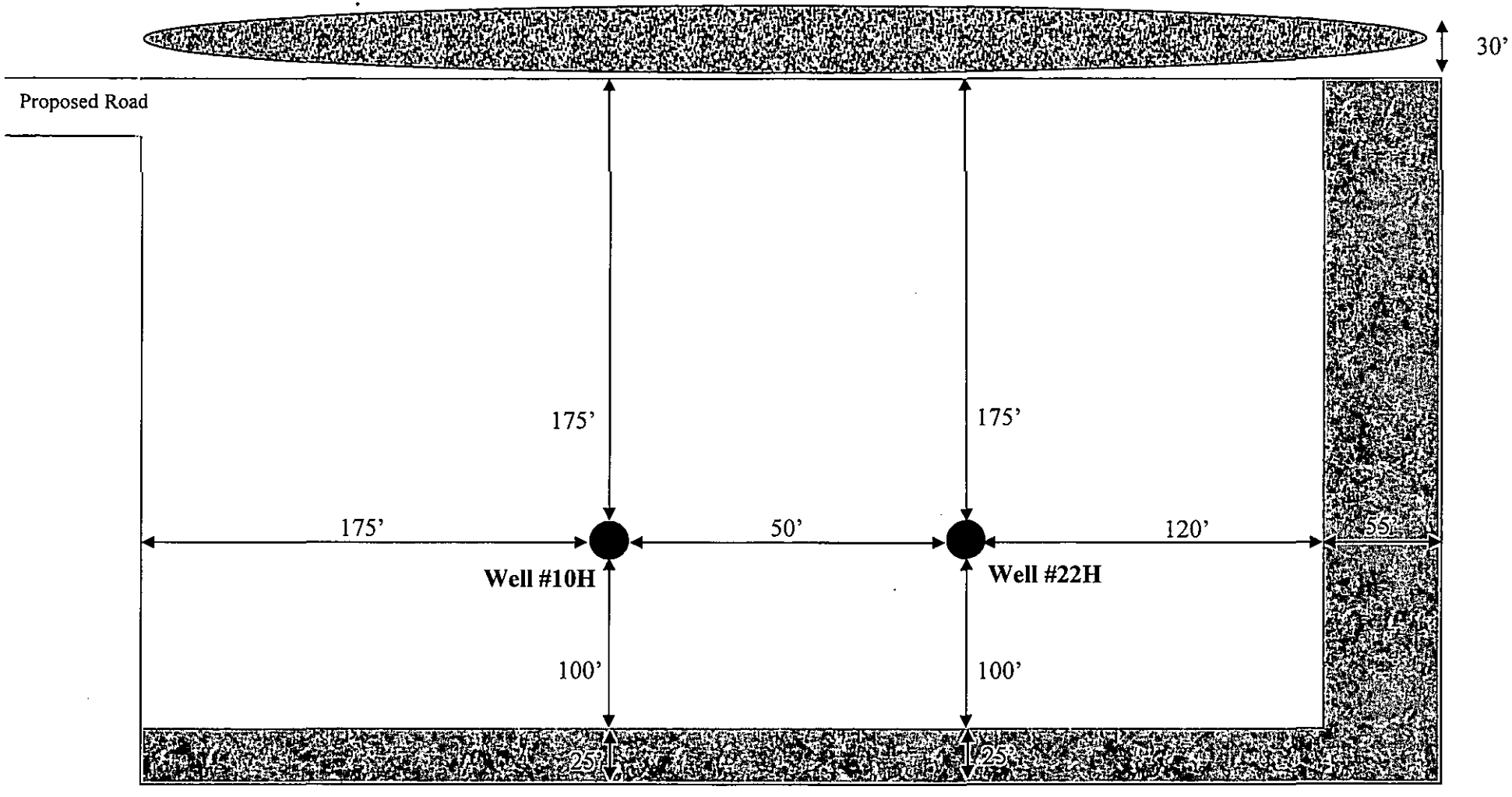
Interim Reclamation

Ditch & Berm

Topsoil

EXHIBIT H F.10

Interim Reclamation Diagram
Corral Canyon Fed Com #10H & #22H
V-Door West (Both Wells)



LEGEND

N

Wellbore

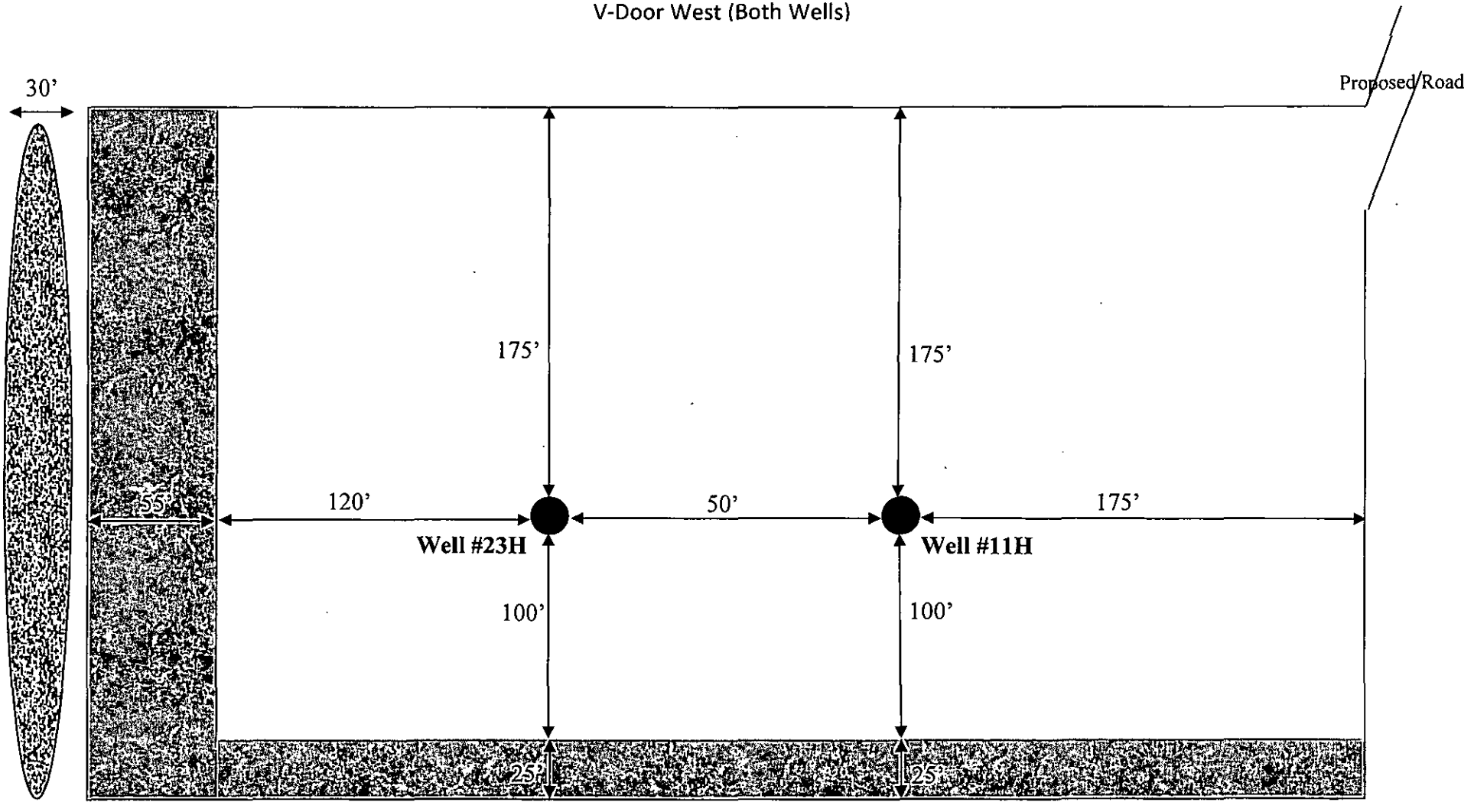
Interim Reclamation

Ditch & Berm

Topsoil

EXHIBIT H F.11

Interim Reclamation Diagram
Corral Canyon Fed Com #11H & #23H
V-Door West (Both Wells)



N

LEGEND

Wellbore

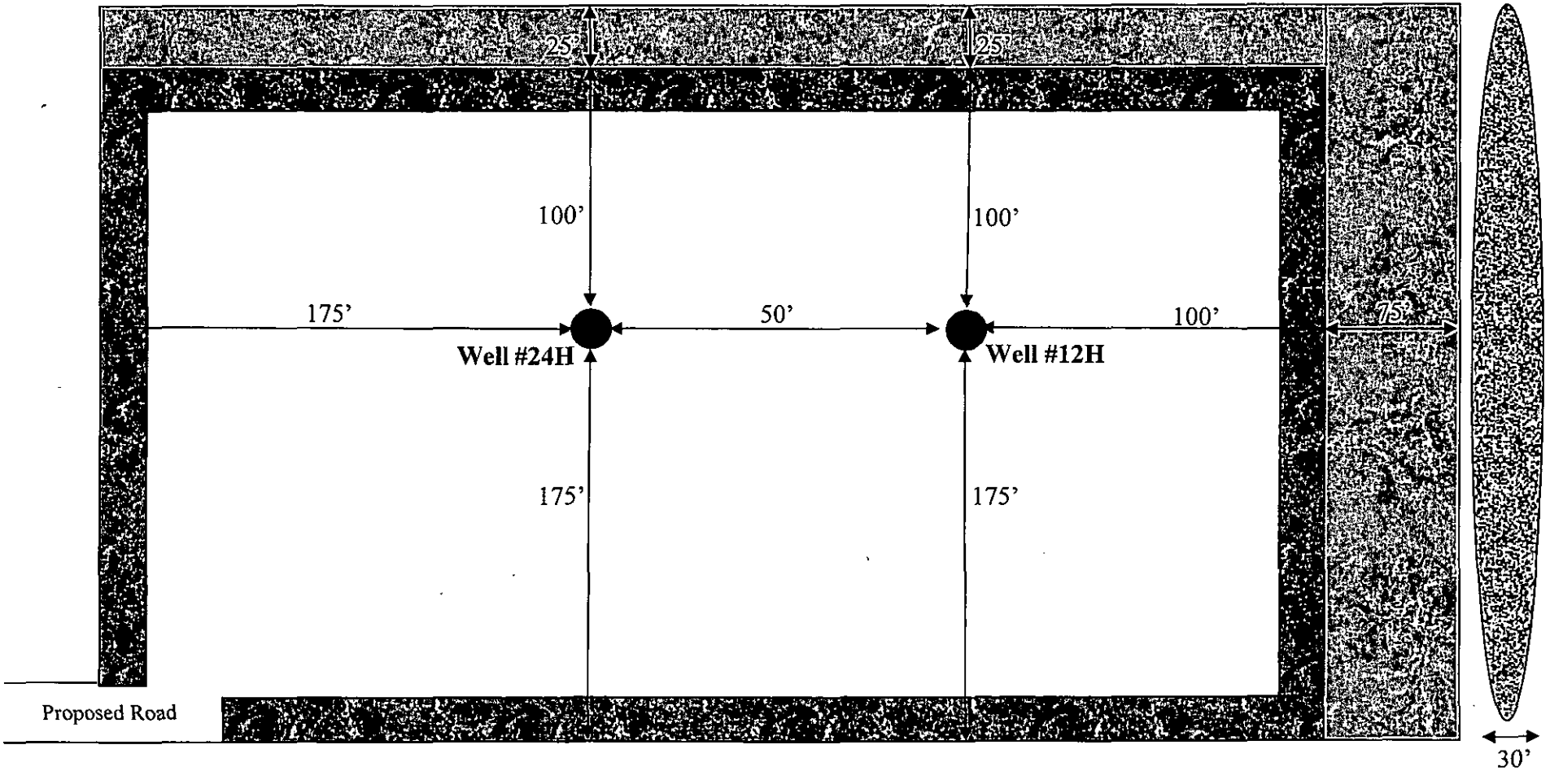
Interim Reclamation

Ditch & Berm

Topsoil

EXHIBIT H F.12

Interim Reclamation Diagram
Corral Canyon Fed Com #12H & #24H
V-Door East (Both Wells)



LEGEND

Wellbore

Interim Reclamation

Ditch & Berm

Topsoil

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Energy, Inc.
LEASE NO.:	NMNM111533
WELL NAME & NO.:	Corral Canyon Federal 13H
SURFACE HOLE FOOTAGE:	190'/S & 520'/E
BOTTOM HOLE FOOTAGE	2310'/S & 940'/W SEC. 32-T24S-R29E
LOCATION:	Section 6, T.25 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Communitization Agreement:

1. The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

2. If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.

3. In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

4. Com shall be included in the Well Name to designate the associated Communitization Agreement. Operator shall submit a Sundry to add "Com" to the well name.

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

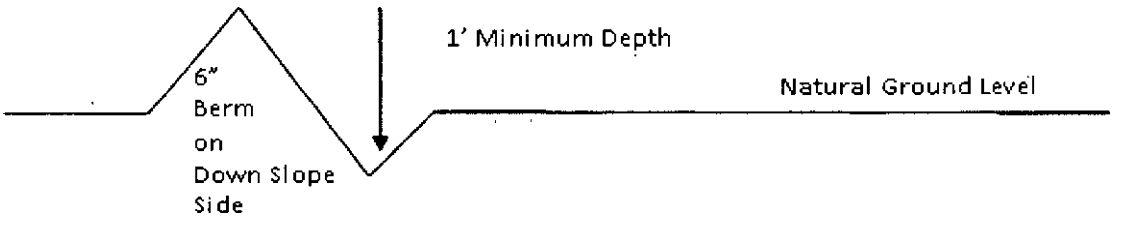
Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

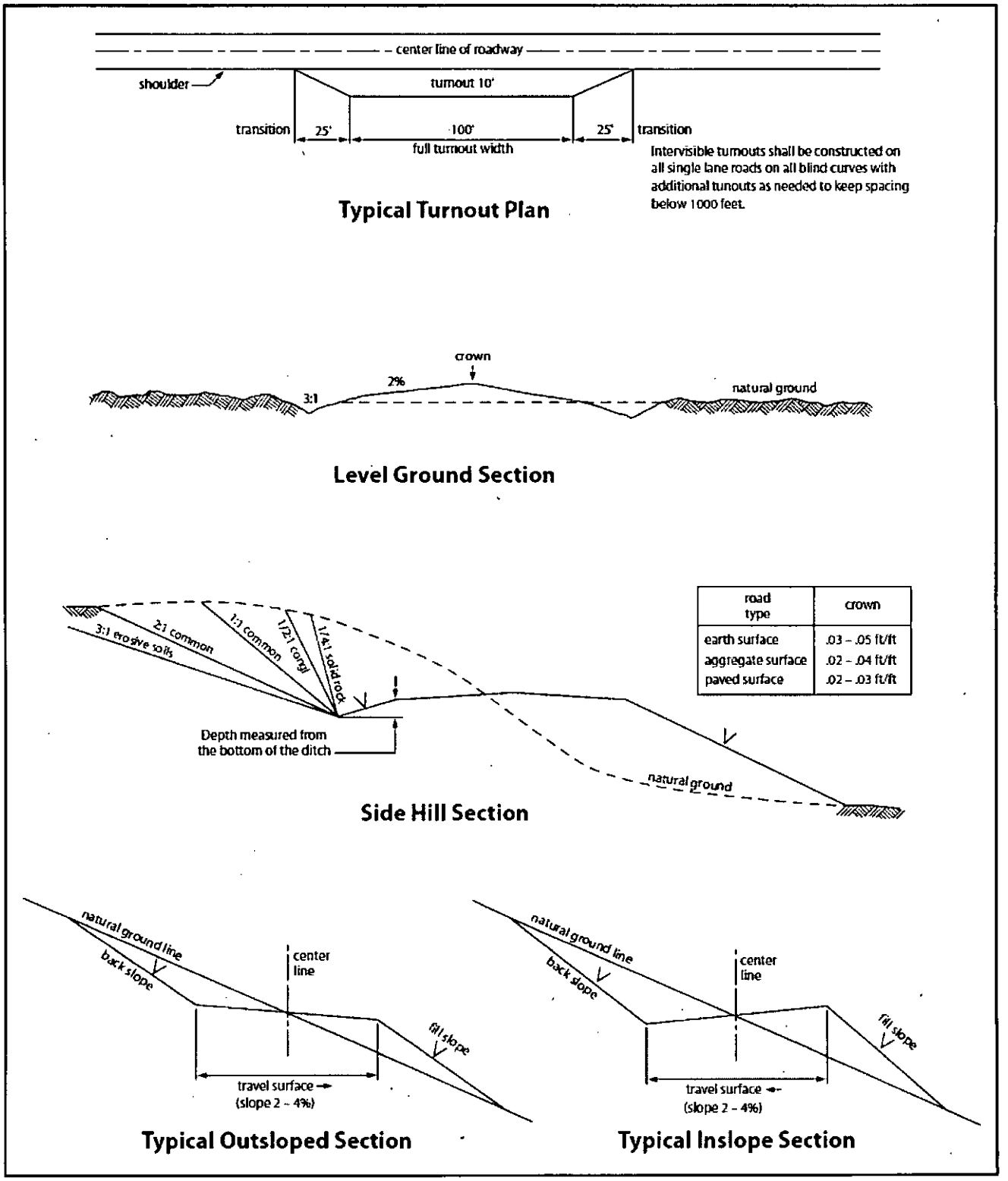


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. 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. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. 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, report measured amounts 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.**

5.

B. CASING

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

The initial wellhead installed on the well will remain on the well with spools used as needed.

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

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.

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.

Risks:
Medium Cave/ Karst Occurrence
Possibility of water flows in the Castile and in the Salado.
Possibility of lost circulation in the Rustler and in the Delaware.

1. The **13 3/8** inch surface casing shall be set at approximately **280** feet **(in a competent bedrock; 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 which shall be set at approximately **2775** feet **(in the Lamar Limestone)** is:

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **If cement does not circulate to surface on the intermediate casing, the cement on the production casing must come to surface. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

Centralizers required through the curve and a minimum of one every other joint.

3. The minimum required fill of cement behind the **5 1/2** inch production casing is:

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

4. 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 53.

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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

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**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

    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.

D. DRILL STEM TEST

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

E. 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.

KGR 10152015

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES
STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq.* (1982) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (*see* 40 CFR, Part 702-799 and in particular, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal

agency or State government.

3. Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way Holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way Holder on the Right-of-Way. This provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;

b. Activities of other parties including, but not limited to:
   (1) Land clearing
   (2) Earth-disturbing and earth-moving work
   (3) Blasting
   (4) Vandalism and sabotage;

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.

8. Holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the

reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

XI.INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed