ATS-16-1257

OCD Artesia

Form 3160-3
(March 2012)

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 04 2017
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR ~~REENTER~~

5. Lease Serial No. NMLC061862	
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. COTTON DRAW 14-23 FED CO 424H 319555
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP 6137	9. API Well No. 30-015-44124
3a. Address 333 West Sheridan Avenue Oklahoma City OK	3b. Phone No. (include area code) (405)552-6571
	10. Field and Pool, or Exploratory COTTON DRAW, SOUTH / DELAWARE 96757
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface NENE / 380 FNL / 775 FEL / LAT 32.1365264 / LONG -103.7426111 At proposed prod. zone SESE / 2310 FNL / 660 FEL / LAT 32.1166926 / LONG -103.7422727	11. Sec., T. R. M. or Blk. and Survey or Area SEC 14 / T25S / R31E / NMP
14. Distance in miles and direction from nearest town or post office* 19 miles	12. County or Parish EDDY / 13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 380 feet	16. No. of acres in lease 1720 / 17. Spacing Unit dedicated to this well 240
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 505 feet	19. Proposed Depth 8175 feet / 15195 feet / 20. BLM/BIA Bond No. on file FED: CO1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3415 feet	22. Approximate date work will start* 08/05/2017 / 23. Estimated duration 45 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 (Electronic Submission)	Name (Printed/Typed) Linda Good / Ph: (405)552-6558	Date 08/11/2016
Title Regulatory Compliance Professional		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 03/06/2017
Title Supervisor Multiple Resources	Office CARLSBAD	

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

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

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

RWP 4-6-2017

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, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-44124	96757	Cotton Draw; Delaware, South

[4] Property Code	[5] Property Name	[6] Well Number
317555	COTTON DRAW 14-23 FED COM	424H

[7] OGRID No.	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3415.1

[10] Surface Location

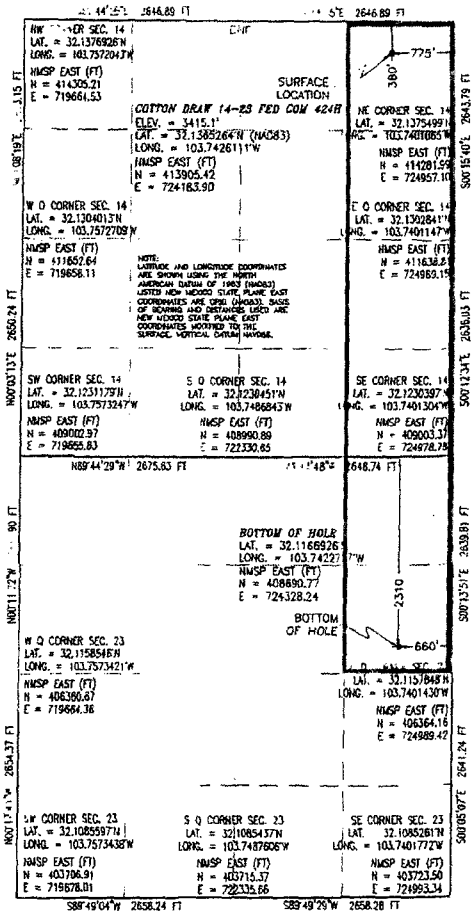
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	14	25 S	31 E		380	NORTH	775	EAST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	23	25 S	31 E		2310	NORTH	660	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
240.00			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

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

Signature — 8/9/2016 Date

Linda Good
Printed Name

linda.good@dvn.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

JUNE 20, 2016
Date of Survey

Signature & Seal of Professional Surveyor

FILIMON F. JARAMILLO, PLS 12797

SURVEY NO. 4656

PP: 323 FSL 207 FEL

APD ID: 10400004234 **Submission Date:** 08/11/2016 Highlight All Changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP **Federal/Indian APD:** FED

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Well Type: OIL WELL **Well Work Type:** Drill

Application

Section 1 - General

APD ID: 10400004234 **Tie to previous NOS?** **Submission Date:** 08/11/2016

BLM Office: CARLSBAD **User:** Linda Good **Title:** Regulatory Compliance Professional

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMLC061862 **Lease Acres:** 1720

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

Keep application confidential? YES

Operator Info

Operator Organization Name: DEVON ENERGY PRODUCTION COMPANY LP

Operator Address: 333 West Sheridan Avenue **Zip:** 73102

Operator PO Box:

Operator City: Oklahoma City **State:** OK

Operator Phone: (405)552-6571

Operator Internet Address: aletha.dewbre@dvn.com

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** COTTON DRAW, SOUTH **Pool Name:** DELAWARE

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

Well Class: HORIZONTAL **Number of Legs:**

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 19 Miles **Distance to nearest well:** 505 FT **Distance to lease line:** 380 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Cotton Draw 14-23 Fed Com 424H_C-102_P_signed_08-09-2016.pdf

Well work start Date: 08/05/2017 **Duration:** 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 4656

	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** EDDY
	Latitude: 32.1365264	**Longitude:** -103.7426111	
SHL	**Elevation:** 3415	**MD:** 0	**TVD:** 0
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMLC061862	
	NS-Foot: 380	**NS Indicator:** FNL	
	EW-Foot: 775	**EW Indicator:** FEL	
	Twsp: 25S	**Range:** 31E	**Section:** 14
	Aliquot: NENE	**Lot:**	**Tract:**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** EDDY
	Latitude: 32.1365264	**Longitude:** -103.7426111	
KOP	**Elevation:** -4288	**MD:** 7725	**TVD:** 7703
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMLC061862	
	NS-Foot: 281	**NS Indicator:** FNL	
	EW-Foot: 207	**EW Indicator:** FEL	
	Twsp: 25S	**Range:** 31E	**Section:** 14
	Aliquot: NENE	**Lot:**	**Tract:**
	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** EDDY
	Latitude: 32.1365264	**Longitude:** -103.7426111	
PPP	**Elevation:** -4760	**MD:** 8600	**TVD:** 8175
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMLC061862	
	NS-Foot: 323	**NS Indicator:** FNL	
	EW-Foot: 207	**EW Indicator:** FEL	
	Twsp: 25S	**Range:** 31E	**Section:** 14
	Aliquot: NENE	**Lot:**	**Tract:**
	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** EDDY
	Latitude: 32.1166926	**Longitude:** -103.7422727	
EXIT	**Elevation:** -4760	**MD:** 15195	**TVD:** 8175
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMLC061862	
	NS-Foot: 2310	**NS Indicator:** FNL	
	EW-Foot: 660	**EW Indicator:** FEL	
	Twsp: 25S	**Range:** 31E	**Section:** 23
	Aliquot: SESE	**Lot:**	**Tract:**
	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** EDDY
	Latitude: 32.1166926	**Longitude:** -103.7422727	
BHL	**Elevation:** -4760	**MD:** 15195	**TVD:** 8175
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMLC061862	
	NS-Foot: 2310	**NS Indicator:** FNL	
	EW-Foot: 660	**EW Indicator:** FEL	

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Twsp: 25S **Range:** 31E **Section:** 23

Aliquot: SESE **Lot:** **Tract:**

Drilling Plan

Section 1 - Geologic Formations

ID: Surface formation **Name:** ---

Lithology(ies):

ALLUVIUM

Elevation: 3415 **True Vertical Depth:** 0 **Measured Depth:** 0

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 1 **Name:** RUSTLER

Lithology(ies):

DOLOMITE

Elevation: 2740 **True Vertical Depth:** 675 **Measured Depth:** 675

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 2 **Name:** SALADO

Lithology(ies):

SALT

Elevation: 2450 **True Vertical Depth:** 965 **Measured Depth:** 965

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 3 **Name:** BASE OF SALT

Lithology(ies):

SALT

Elevation: -750 **True Vertical Depth:** 4165 **Measured Depth:** 4165

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 4 **Name:** DELAWARE

Lithology(ies):

SANDSTONE

Elevation: -971 **True Vertical Depth:** 4386 **Measured Depth:** 4386

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 5 **Name:** BELL CANYON

Lithology(ies):

SANDSTONE

Elevation: -1004 **True Vertical Depth:** 4419 **Measured Depth:** 4419

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 6 **Name:** LAMAR

Lithology(ies):

SANDSTONE

Elevation: -1275 **True Vertical Depth:** 4690 **Measured Depth:** 4690

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 7 **Name:** CHERRY CANYON

Lithology(ies):

SANDSTONE

Elevation: -1950 **True Vertical Depth:** 5365 **Measured Depth:** 5365

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 8 **Name:** BRUSHY CANYON

Lithology(ies):

SANDSTONE

Elevation: -3261 **True Vertical Depth:** 6676 **Measured Depth:** 6676

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 9 **Name:** BRUSHY CANYON LOWER

Lithology(ies):

SANDSTONE

Elevation: -4675 **True Vertical Depth:** 8090 **Measured Depth:** 8090

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? Y

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 4190

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

Testing Procedure: A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Choke Diagram Attachment:

Cotton Draw 14-23 Fed Com 424H_3M BOPE Double Ram and CLS Schem -Use_08-09-2016.pdf

BOP Diagram Attachment:

Cotton Draw 14-23 Fed Com 424H_3M BOPE Double Ram and CLS Schem -Use_08-09-2016.pdf

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Pressure Rating (PSI): 3M **Rating Depth:** 8175

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

Testing Procedure: A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Choke Diagram Attachment:

Cotton Draw 14-23 Fed Com 424H_3M BOPE Double Ram and CLS Schem -Use_08-09-2016.pdf

BOP Diagram Attachment:

Cotton Draw 14-23 Fed Com 424H_3M BOPE Double Ram and CLS Schem -Use_08-09-2016.pdf

Section 3 - Casing

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

See COA

String Type: SURFACE **Other String Type:**

Hole Size: 17.5

Top setting depth MD: 0 **Top setting depth TVD:** 0

Top setting depth MSL: 3415

Bottom setting depth MD: ~~700~~ 760 **Bottom setting depth TVD:** ~~700~~ 760

Bottom setting depth MSL: 2715

Calculated casing length MD: ~~700~~ 760

Casing Size: 13.375 **Other Size**

Grade: J-55 **Other Grade:**

Weight: 48

Joint Type: STC **Other Joint Type:**

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.74 **Burst Design Safety Factor:** 2.45

Joint Tensile Design Safety Factor type: BUOYANT **Joint Tensile Design Safety Factor:** 4.13

Body Tensile Design Safety Factor type: BUOYANT **Body Tensile Design Safety Factor:** 4.13

Casing Design Assumptions and Worksheet(s):

Cotton Draw 14-23 Fed Com 424H_Surface Casing Assumptions_08-09-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

See COA

String Type: INTERMEDIATE **Other String Type:**

Hole Size: 12.25

Top setting depth MD: 0 **Top setting depth TVD:** 0

Top setting depth MSL: 3415

Bottom setting depth MD: ~~4190~~ 4319 **Bottom setting depth TVD:** ~~4190~~ 4319

Bottom setting depth MSL: -775

Calculated casing length MD: ~~4190~~ 4319

Casing Size: 9.625 **Other Size**

Grade: J-55 **Other Grade:**

Weight: 40

Joint Type: LTC **Other Joint Type:**

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.19 **Burst Design Safety Factor:** 1.42

Joint Tensile Design Safety Factor type: BUOYANT **Joint Tensile Design Safety Factor:** 3.98

Body Tensile Design Safety Factor type: BUOYANT **Body Tensile Design Safety Factor:** 3.98

Casing Design Assumptions and Worksheet(s):

Cotton Draw 14-23 Fed Com 424H_Intermediate Casing Assumptions_08-09-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

String Type: PRODUCTION **Other String Type:**

Hole Size: 8.75

Top setting depth MD: 0 **Top setting depth TVD:** 0

Top setting depth MSL: 3415

Bottom setting depth MD: 15145 **Bottom setting depth TVD:** 8175

Bottom setting depth MSL: -4760

Calculated casing length MD: 15145

Casing Size: 5.5 **Other Size**

Grade: ~~P-105~~ P-110 **Other Grade:**

Weight: 17

Joint Type: BUTT **Other Joint Type:**

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 2.18 **Burst Design Safety Factor:** 2.7

Joint Tensile Design Safety Factor type: BUOYANT **Joint Tensile Design Safety Factor:** 3.21

Body Tensile Design Safety Factor type: BUOYANT **Body Tensile Design Safety Factor:** 3.21

Casing Design Assumptions and Worksheet(s):

Cotton Draw 14-23 Fed Com 424H_Production Casing Assumptions_08-09-2016.pdf

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Section 4 - Cement

Casing String Type: SURFACE

See COA

Stage Tool Depth:

Lead

Top MD of Segment: 0	**Bottom MD Segment:** ~~700~~ 760	**Cement Type:** C
Additives: 1% Calcium Chloride	**Quantity (sks):** 560	**Yield (cu.ff./sk):** 1.34
Density: 14.8	**Volume (cu.ft.):** 736	**Percent Excess:** 50

Casing String Type: INTERMEDIATE

Stage Tool Depth:

Lead

Top MD of Segment: 0	**Bottom MD Segment:** 3190	**Cement Type:** C
Additives: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sks Poly-E-Flake	**Quantity (sks):** 675	**Yield (cu.ff./sk):** 1.85
Density: 12.9	**Volume (cu.ft.):** 1240	**Percent Excess:** 30

Tail 4314

	Bottom MD Segment: ~~4190~~	**Cement Type:** H
Top MD of Segment: 3190	**Quantity (sks):** 310	**Yield (cu.ff./sk):** 1.33
Additives: 0.125 lbs/sks Poly-R-Flake	**Volume (cu.ft.):** 410	**Percent Excess:** 30
Density: 14.8		

Casing String Type: PRODUCTION

Stage Tool Depth:

Lead

Top MD of Segment: 3990	**Bottom MD Segment:** 8100	**Cement Type:** TUNED
Additives: N/A	**Quantity (sks):** 365	**Yield (cu.ff./sk):** 3.27
Density: 9	**Volume (cu.ft.):** 1488	**Percent Excess:** 25

Tail

Top MD of Segment: 8100	**Bottom MD Segment:** 16000	**Cement Type:** H
Additives: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite	**Quantity (sks):** 1920	**Yield (cu.ff./sk):** 1.2
Density: 14.5	**Volume (cu.ft.):** 2302	**Percent Excess:** 25

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

4319

Top Depth: 0 **Bottom Depth:** ~~4190~~

Mud Type: SALT SATURATED

Min Weight (lbs./gal.): 10 **Max Weight (lbs./gal.):** 11

SEE COA

Density (lbs/cu.ft.): **Gel Strength (lbs/100 sq.ft.):**

PH: **Viscosity (CP):** 2

Filtration (cc): **Salinity (ppm):**

Additional Characteristics:

760

Top Depth: 0 **Bottom Depth:** ~~700~~

Mud Type: WATER-BASED MUD

Min Weight (lbs./gal.): 8.5 **Max Weight (lbs./gal.):** 9

Density (lbs/cu.ft.): **Gel Strength (lbs/100 sq.ft.):**

PH: **Viscosity (CP):** 2

Filtration (cc): **Salinity (ppm):**

Additional Characteristics:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Top Depth: ~~4190~~ 4319 **Bottom Depth:** 15145

Mud Type: WATER-BASED MUD

Min Weight (lbs./gal.): 8.5 **Max Weight (lbs./gal.):** 9.3

Density (lbs/cu.ft.): **Gel Strength (lbs/100 sq.ft.):**

PH: **Viscosity (CP):** 12

Filtration (cc): **Salinity (ppm):**

Additional Characteristics:

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Will run GR/CNL fromTD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.

List of open and cased hole logs run in the well:

CALIPER,DS,GR,MWD,MUDLOG

Coring operation description for the well:

NA

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3966 **Anticipated Surface Pressure:** 2167.5

Anticipated Bottom Hole Temperature(F): 150

Anticipated abnormal proessures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Cotton Draw 14-23 Fed Com 424H_H2S Plan_08-09-2016.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Cotton Draw 14-23 Fed Com 424H_Directional Plan_08-09-2016.pdf

Other proposed operations facets description:

Multi-Bowl Wellhead
Multi-Bowl Verbiage

Other proposed operations facets attachment:

Cotton Draw 14-23 Fed Com 424H_Multi-Bowl Verbiage_3M_08-09-2016.pdf
Cotton Draw 14-23 Fed Com 424H_Multi-Bowl Wellhead_08-09-2016.pdf
Cotton Draw 14-23 Fed Com 424H_ProdCmtContg_11-21-2016.pdf

Other Variance attachment:

Cotton Draw 14-23 Fed Com 424H_H_P Co-flex hose_08-09-2016.pdf

SUPO

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

CDU 288H_Existing Access Road_08-10-2016.pdf
Cotton Draw 14-23 Fed Com 424H_Electric EL7855 Pad Connect_08-11-2016.PDF
Cotton Draw 14-23 Fed Com 424H_Flowline 6 IN GL_FL to CD 14 CTB_08-11-2016.PDF

Existing Road Purpose: ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Improve road to accommodate Drilling and Completion operations.

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

CDU 288H_1 Mile Map_08-10-2016.pdf

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: CDU 14 CTB

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: STIMULATION

Water source type: RECYCLED

Describe type:

Source latitude:

Source longitude:

Source datum:

Water source permit type: OTHER

Source land ownership: FEDERAL

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 85000

Source volume (acre-feet): 10.955914

Source volume (gal): 3570000

Water source and transportation map:

CD 14-23 Fed Com 424H_WTR Xfr Map_rev_11-21-2016.pdf

Water source comments: The attached Water Transfer Map is a proposal only and the final route and documentation will be provided by a Devon contractor prior to installation. When available Devon will always follow existing disturbance.
New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Dirt fill and Caliche will be used to construct well pad.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Water based cuttings.

Amount of waste: 1650 barrels

Waste disposal frequency : Daily

Safe containment description: No asterisk, not a requirement.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: All cuttings will disposed of at R360, Sundance, or equivalent.

Waste type: FLOWBACK

Waste content description: Produced water during flowback operations. This amount is a daily average during flowback (BWPD).

Amount of waste: 1500 barrels

Waste disposal frequency : Daily

Safe containment description: NA

Safe containmant attachment:

Waste disposal type: ON-LEASE INJECTION **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: One of three company owned SWD facilities in the area: CDU 181, CDU 89, CDU 84.

Waste type: COMPLETIONS/STIMULATION

Waste content description: Flow back water during completion operations.

Amount of waste: 3000 barrels

Waste disposal frequency : One Time Only

Safe containment description: NA

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Various disposal locations in Lea and Eddy counties.

Waste type: PRODUCED WATER

Waste content description: Produced water during flowback operations. This amount is a daily average during flowback (BWPD).

Amount of waste: 1000 barrels

Waste disposal frequency : Daily

Safe containment description: NA

Safe containmant attachment:

Waste disposal type: ON-LEASE INJECTION **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: One of three company owned SWD facilities in the area: CDU 181, CDU 89, CDU 84.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Cotton Draw 14-23 Fed Com 424H_Single Well Rig Location Layout_08-11-2016.pdf

Comments:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Section 10 - Plans for Surface Reclamation

Type of disturbance: PAD EXPANSION

Recontouring attachment:

Cotton Draw 14-23 Fed Com 424H_Interim Reclamation_08-10-2016.pdf

Drainage/Erosion control construction: All areas disturbed shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable.
Drainage/Erosion control reclamation: Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded in the first favorable growing season.

Wellpad long term disturbance (acres): 1.611 **Wellpad short term disturbance (acres):** 3.713

Access road long term disturbance (acres): 0.074 **Access road short term disturbance (acres):** 0.074

Pipeline long term disturbance (acres): 2.4697108 **Pipeline short term disturbance (acres):** 4.1161847

Other long term disturbance (acres): 0 **Other short term disturbance (acres):** 0

Total long term disturbance: 4.154711 **Total short term disturbance:** 7.9031844

Reconstruction method: Operator will use Best Management Practices"BMP" to mechanically recontour to obtain the desired outcome.
Topsoil redistribution: Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
Soil treatment: Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
Existing Vegetation at the well pad: Shinnery, yucca, grasses and mesquite.

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Shinnery, yucca, grasses and mesquite.

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Shinnery, yucca, grasses and mesquite.

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Shinnery, yucca, grasses and mesquite.

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Mark **Last Name:** Smith

Phone: (575)746-5559 **Email:** mark.smith@dvn.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Maintain weeds on an as need basis.

Weed treatment plan attachment:

Monitoring plan description: Monitor as needed.

Monitoring plan attachment:

Success standards: NA

Pit closure description: NA

Pit closure attachment:

Section 11 - Surface Ownership

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information: Electric Survey Flow line Survey

Use a previously conducted onsite? NO

Previous Onsite information:

Other SUPO Attachment

PWD

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

Bond Info

Bond Information

Federal/Indian APD: FED

BLM Bond number: CO1104

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW 14-23 FED COM **Well Number:** 424H

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

Operator Certification

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently 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 the terms and conditions under which it is approved. I also certify that I, or the company I represent, 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.

NAME: Linda Good **Signed on:** 08/11/2016

Title: Regulatory Compliance Professional

Street Address: 333 West Sheridan Avenue

City: Oklahoma City **State:** OK **Zip:** 73102

Phone: (405)552-6558

Email address: Linda.Good@dvn.com

Field Representative

Representative Name: Brad Oates

Street Address: 6488 Seven Rivers Hwy

City: Artesia **State:** NM **Zip:** 88210

Phone: (575)748-1810

Email address: brad.oates@dvn.com

Payment Info

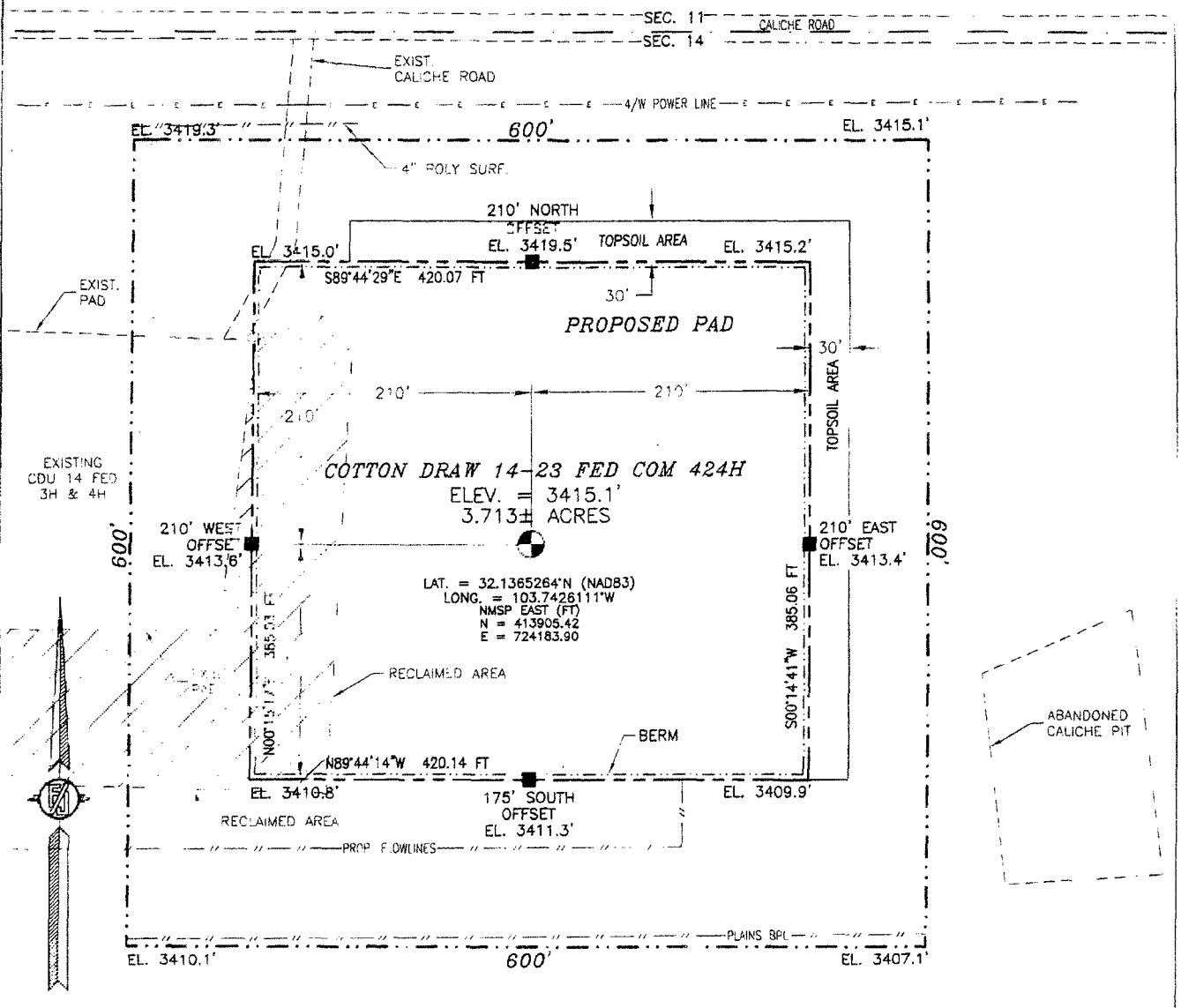
Payment

APD Fee Payment Method: PAY.GOV

pay.gov Tracking ID: 25T91G8D

SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. VERTICAL DATUM NAVD88.



012 60 120 240

SCALE 1" = 120'

DIRECTIONS TO LOCATION

FROM STATE HIGHWAY 128 AND CR 1 (ORLA ROAD) GO SOUTH ON CR 1 6.1 MILES, TURN RIGHT ON CALICHE ROAD (MONSANTO ROAD) GO WEST 2.1 MILES, TURN RIGHT AND GO NORTH 0.75 OF A MILE, BEND LEFT AND GO WEST 2.0 MILES, BEND RIGHT AND GO NORTH 0.2 OF A MILE, TURN LEFT AND GO WEST 945', TURN LEFT AND GO SOUTH-SOUTHWEST 240' TO THE NORTHWEST PAD CORNER FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

COTTON DRAW 14-23 FED COM 424H

LOCATED 380 FT. FROM THE NORTH LINE AND 775 FT. FROM THE EAST LINE OF SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO

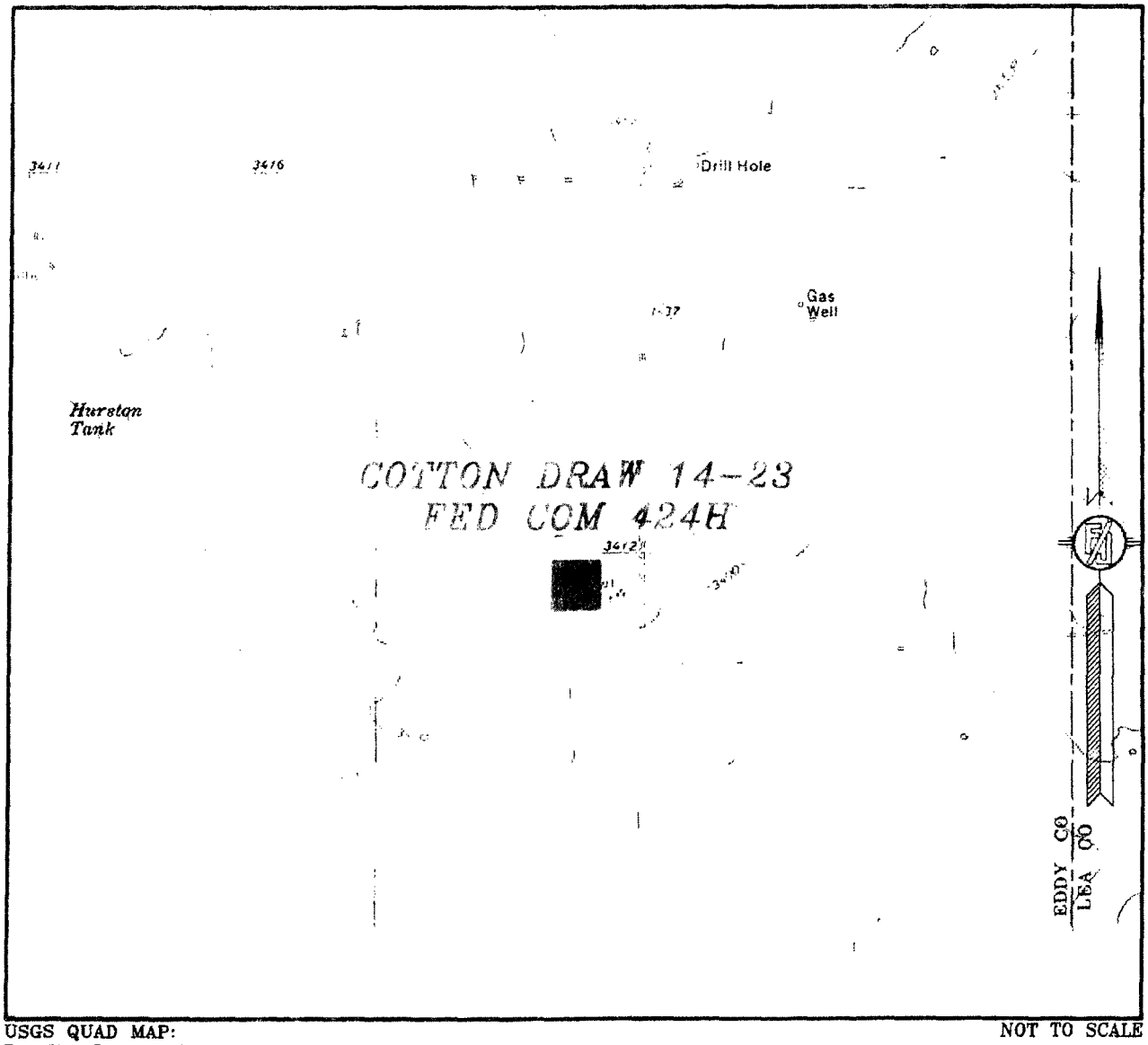
JUNE 20, 2016

SURVEY NO. 4656

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 *CARLSBAD, NEW MEXICO*

SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



USGS QUAD MAP:
PADUCA BREAKS NW,
BIG SINKS

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P
COTTON DRAW 14-23 FED COM 424H
LOCATED 380 FT. FROM THE NORTH LINE
AND 775 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 25 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

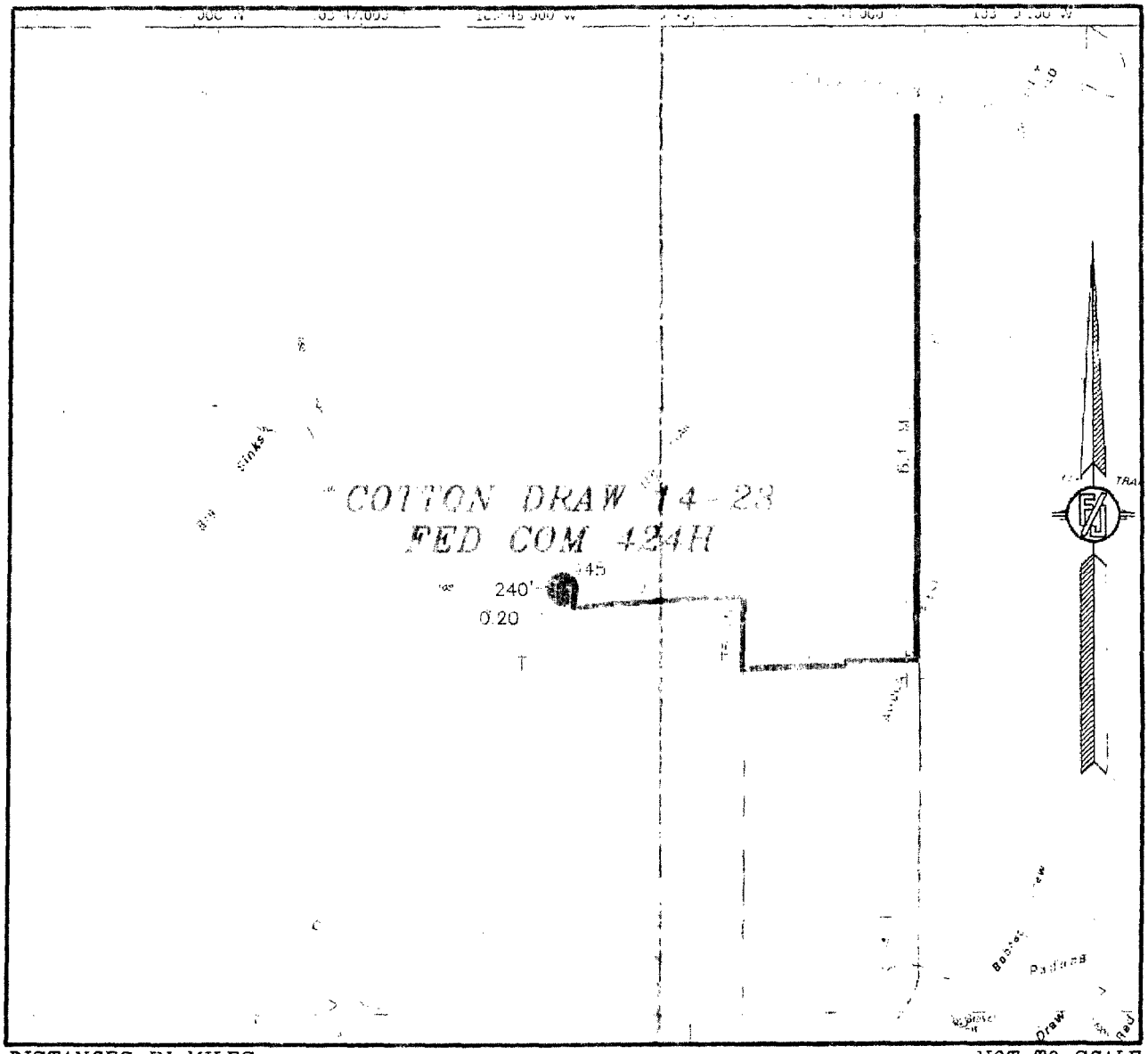
JUNE 20, 2016

SURVEY NO. 4656

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION
FROM STATE HIGHWAY 128 AND CR 1 (ORLA ROAD) GO SOUTH ON CR 1 6.1 MILES, TURN RIGHT ON CALICHE ROAD (MONSANTO ROAD) GO WEST 2.1 MILES, TURN RIGHT AND GO NORTH 0.75 OF A MILE, BEND LEFT AND GO WEST 2.0 MILES, BEND RIGHT AND GO NORTH 0.2 OF A MILE, TURN LEFT AND GO WEST 945', TURN LEFT AND GO SOUTH-SOUTHWEST 240' TO THE NORTHWEST PAD CORNER FOR THIS LOCATION.

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JUNE 20, 2016

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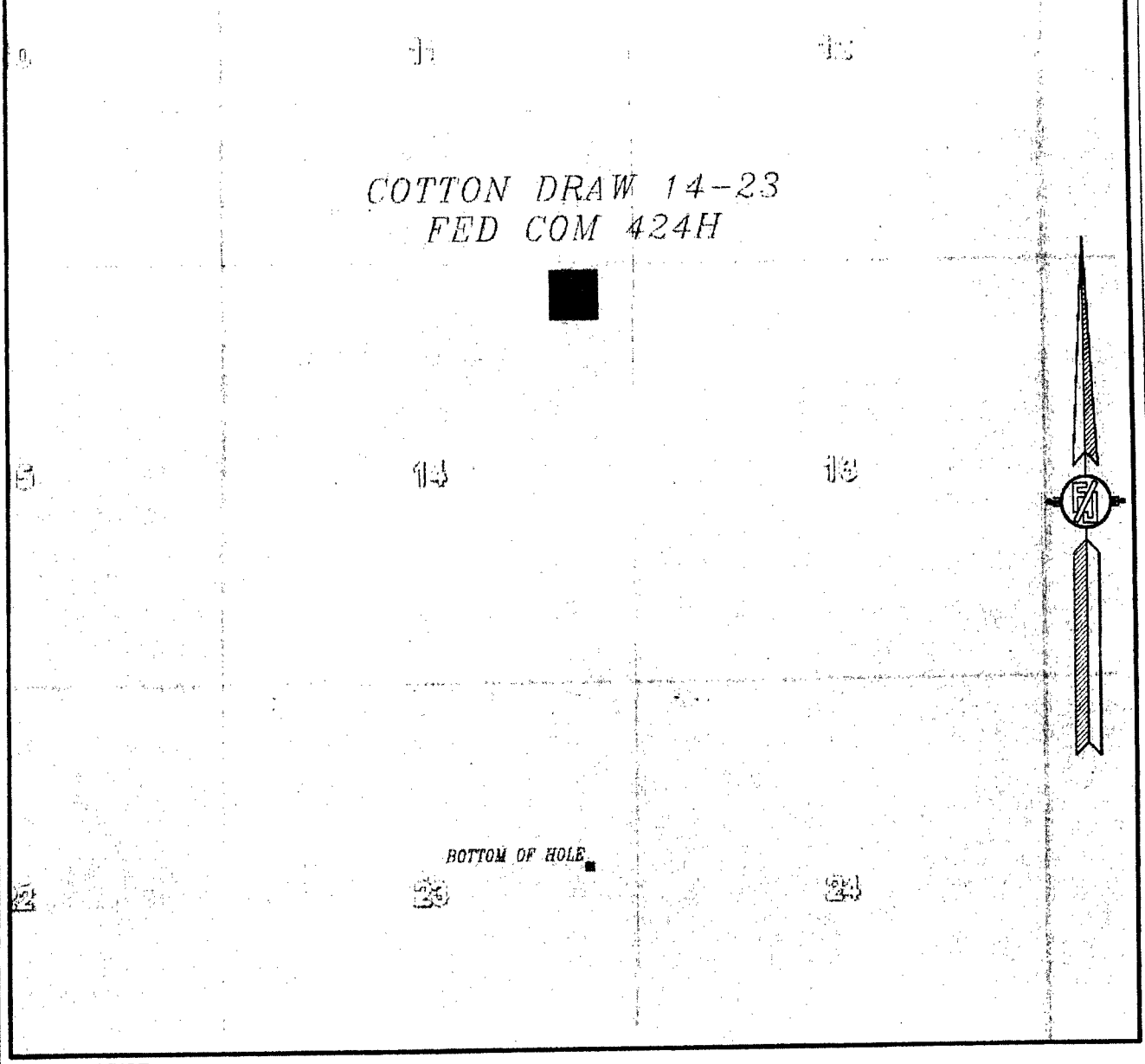
SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOVEMBER 2015

DEVON ENERGY PRODUCTION COMPANY, L.P.
COTTON DRAW 14-23 FED COM 424H
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EDDY COUNTY, STATE OF NEW MEXICO

JUNE 20, 2016

SURVEY NO. 4656

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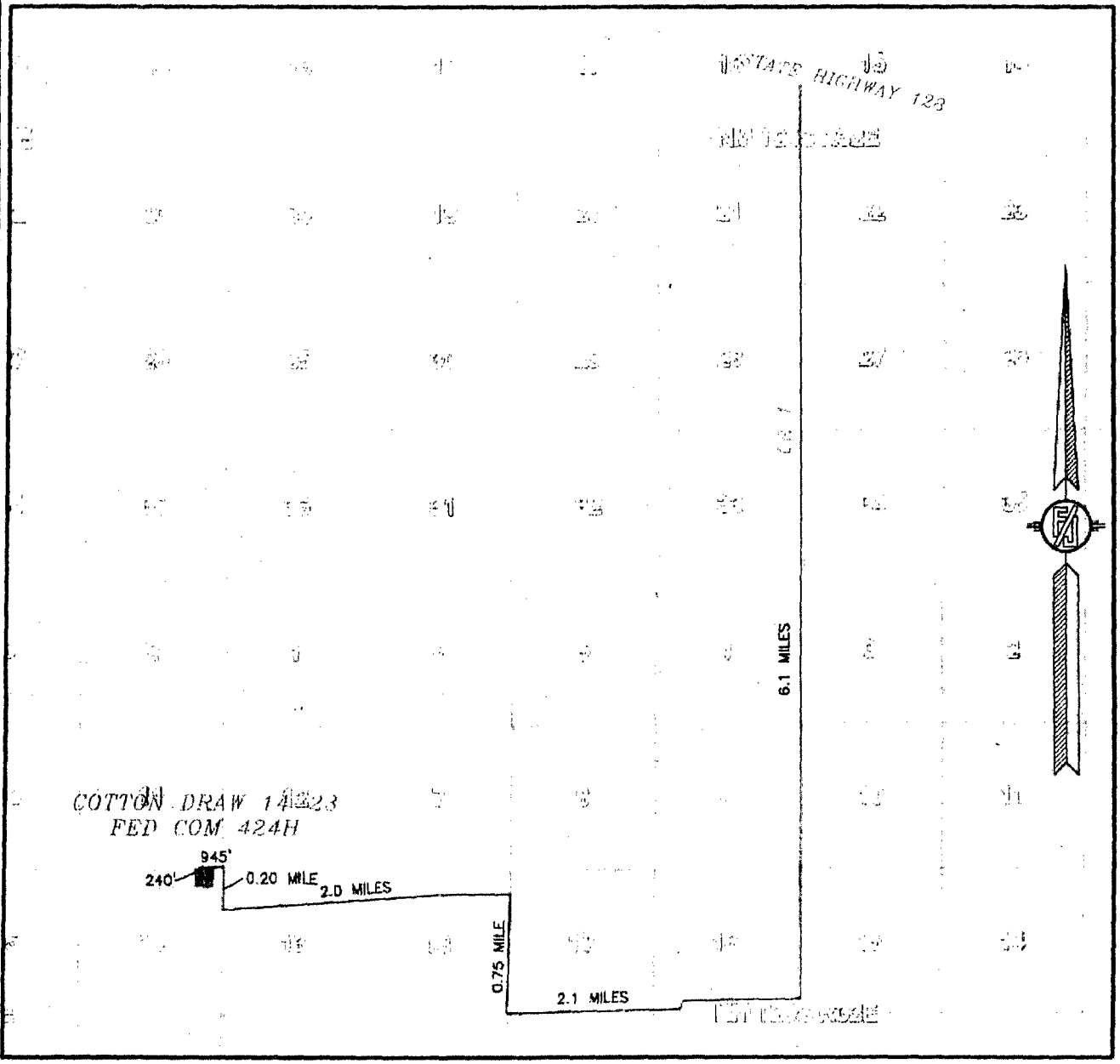
SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

ACCESS AERIAL ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
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MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

DEVON ENERGY

Eddy County, NM (NAD-83)
Cotton Draw 14-23 Fed Com
424H

OH

Plan: Plan #1

Standard Planning Report

08 August, 2016

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 424H
Company:	DEVON ENERGY	**TVD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Project:	Eddy County, NM (NAD-83)	**MD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Site:	Cotton Draw 14-23 Fed Com	**North Reference:**	Grid
Well:	424H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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

Site Cotton Draw 14-23 Fed Com

Site Position:		**Northing:**	413,905.42 usft	**Latitude:**	32° 8' 11.495 N
From:	Map	**Easting:**	724,183.90 usft	**Longitude:**	103° 44' 33.400 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.31 °

Well 424H

Well Position	**+N/-S**	0.00 usft	**Northing:**	413,905.42 usft	**Latitude:**	32° 8' 11.495 N
	+E/-W	0.00 usft	**Easting:**	724,183.90 usft	**Longitude:**	103° 44' 33.400 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	3,440.10 usft	**Ground Level:**	3,415.10 usft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	8/8/2016	6.95	59.90	48,140

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.00	0.00	0.00	178.85	

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	
7,602.04	0.00	0.00	7,602.04	0.00	0.00	0.00	0.00	0.00	0.00	
8,502.04	90.00	178.85	8,175.00	-572.84	11.46	10.00	10.00	0.00	178.85	
15,145.18	90.00	178.85	8,175.00	-7,214.65	144.34	0.00	0.00	0.00	0.00	PBHL (CD14-23FC 4

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 424H
Company:	DEVON ENERGY	**TVD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Project:	Eddy County, NM (NAD-83)	**MD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Site:	Cotton Draw 14-23 Fed Com	**North Reference:**	Grid
Well:	424H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (CD14-23FC 424H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
675.00	0.00	0.00	675.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
965.00	0.00	0.00	965.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
980.00	0.00	0.00	980.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	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
4,165.00	0.00	0.00	4,165.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
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
4,386.00	0.00	0.00	4,386.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 424H
Company:	DEVON ENERGY	**TVD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Project:	Eddy County, NM (NAD-83)	**MD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Site:	Cotton Draw 14-23 Fed Com	**North Reference:**	Grid
Well:	424H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Delaware									
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,419.00	0.00	0.00	4,419.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
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
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,365.00	0.00	0.00	5,365.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,676.00	0.00	0.00	6,676.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,602.04	0.00	0.00	7,602.04	0.00	0.00	0.00	0.00	0.00	0.00
KOP 10° DLS - KOP (CD14-23 FC 424H)									
7,650.00	4.80	178.85	7,649.94	-2.01	0.04	2.01	10.00	10.00	0.00
7,700.00	9.80	178.85	7,699.52	-8.35	0.17	8.35	10.00	10.00	0.00
7,750.00	14.80	178.85	7,748.36	-18.99	0.38	19.00	10.00	10.00	0.00
7,800.00	19.80	178.85	7,796.09	-33.85	0.68	33.86	10.00	10.00	0.00
7,850.00	24.80	178.85	7,842.33	-52.81	1.06	52.82	10.00	10.00	0.00
7,896.84	29.48	178.85	7,884.00	-74.16	1.48	74.18	10.00	10.00	0.00
Madera									
7,900.00	29.80	178.85	7,886.75	-75.73	1.52	75.74	10.00	10.00	0.00
7,950.00	34.80	178.85	7,929.00	-102.43	2.05	102.45	10.00	10.00	0.00
8,000.00	39.80	178.85	7,968.77	-132.71	2.66	132.74	10.00	10.00	0.00
8,050.00	44.80	178.85	8,005.74	-166.34	3.33	166.37	10.00	10.00	0.00
8,100.00	49.80	178.85	8,039.64	-203.06	4.06	203.11	10.00	10.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 424H
Company:	DEVON ENERGY	**TVD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Project:	Eddy County, NM (NAD-83)	**MD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Site:	Cotton Draw 14-23 Fed Com	**North Reference:**	Grid
Well:	424H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,150.00	54.80	178.85	8,070.21	-242.60	4.85	242.65	10.00	10.00	0.00
8,185.96	58.39	178.85	8,090.00	-272.61	5.45	272.66	10.00	10.00	0.00
Lower Brushy Canyon									
8,200.00	59.80	178.85	8,097.21	-284.66	5.69	284.71	10.00	10.00	0.00
8,250.00	64.80	178.85	8,120.45	-328.90	6.58	328.97	10.00	10.00	0.00
8,300.00	69.80	178.85	8,139.74	-375.00	7.50	375.08	10.00	10.00	0.00
8,350.00	74.80	178.85	8,154.95	-422.61	8.45	422.69	10.00	10.00	0.00
8,400.00	79.80	178.85	8,165.94	-471.36	9.43	471.45	10.00	10.00	0.00
8,450.00	84.80	178.85	8,172.64	-520.88	10.42	520.99	10.00	10.00	0.00
8,502.04	90.00	178.85	8,175.00	-572.84	11.46	572.95	10.00	10.00	0.00
D Sand Target Top									
8,502.04	90.00	178.85	8,175.00	-572.84	11.46	572.96	0.00	0.00	0.00
LP - POE (CD14-23FC 424H)									
8,600.00	90.00	178.85	8,175.00	-670.78	13.42	670.92	0.00	0.00	0.00
8,700.00	90.00	178.85	8,175.00	-770.76	15.42	770.92	0.00	0.00	0.00
8,800.00	90.00	178.85	8,175.00	-870.74	17.42	870.92	0.00	0.00	0.00
8,900.00	90.00	178.85	8,175.00	-970.72	19.42	970.92	0.00	0.00	0.00
9,000.00	90.00	178.85	8,175.00	-1,070.70	21.42	1,070.92	0.00	0.00	0.00
9,100.00	90.00	178.85	8,175.00	-1,170.68	23.42	1,170.92	0.00	0.00	0.00
9,200.00	90.00	178.85	8,175.00	-1,270.66	25.42	1,270.92	0.00	0.00	0.00
9,300.00	90.00	178.85	8,175.00	-1,370.64	27.42	1,370.92	0.00	0.00	0.00
9,400.00	90.00	178.85	8,175.00	-1,470.62	29.42	1,470.92	0.00	0.00	0.00
9,500.00	90.00	178.85	8,175.00	-1,570.60	31.42	1,570.92	0.00	0.00	0.00
9,600.00	90.00	178.85	8,175.00	-1,670.58	33.42	1,670.92	0.00	0.00	0.00
9,700.00	90.00	178.85	8,175.00	-1,770.56	35.42	1,770.92	0.00	0.00	0.00
9,800.00	90.00	178.85	8,175.00	-1,870.54	37.42	1,870.92	0.00	0.00	0.00
9,900.00	90.00	178.85	8,175.00	-1,970.52	39.42	1,970.92	0.00	0.00	0.00
10,000.00	90.00	178.85	8,175.00	-2,070.50	41.42	2,070.92	0.00	0.00	0.00
10,100.00	90.00	178.85	8,175.00	-2,170.48	43.42	2,170.92	0.00	0.00	0.00
10,200.00	90.00	178.85	8,175.00	-2,270.46	45.42	2,270.92	0.00	0.00	0.00
10,300.00	90.00	178.85	8,175.00	-2,370.44	47.42	2,370.92	0.00	0.00	0.00
10,400.00	90.00	178.85	8,175.00	-2,470.42	49.42	2,470.92	0.00	0.00	0.00
10,500.00	90.00	178.85	8,175.00	-2,570.40	51.42	2,570.92	0.00	0.00	0.00
10,600.00	90.00	178.85	8,175.00	-2,670.38	53.43	2,670.92	0.00	0.00	0.00
10,700.00	90.00	178.85	8,175.00	-2,770.36	55.43	2,770.92	0.00	0.00	0.00
10,800.00	90.00	178.85	8,175.00	-2,870.34	57.43	2,870.92	0.00	0.00	0.00
10,900.00	90.00	178.85	8,175.00	-2,970.32	59.43	2,970.92	0.00	0.00	0.00
11,000.00	90.00	178.85	8,175.00	-3,070.30	61.43	3,070.92	0.00	0.00	0.00
11,100.00	90.00	178.85	8,175.00	-3,170.28	63.43	3,170.92	0.00	0.00	0.00
11,200.00	90.00	178.85	8,175.00	-3,270.26	65.43	3,270.92	0.00	0.00	0.00
11,300.00	90.00	178.85	8,175.00	-3,370.24	67.43	3,370.92	0.00	0.00	0.00
11,400.00	90.00	178.85	8,175.00	-3,470.22	69.43	3,470.92	0.00	0.00	0.00
11,500.00	90.00	178.85	8,175.00	-3,570.20	71.43	3,570.92	0.00	0.00	0.00
11,600.00	90.00	178.85	8,175.00	-3,670.18	73.43	3,670.92	0.00	0.00	0.00
11,700.00	90.00	178.85	8,175.00	-3,770.16	75.43	3,770.92	0.00	0.00	0.00
11,800.00	90.00	178.85	8,175.00	-3,870.14	77.43	3,870.92	0.00	0.00	0.00
11,900.00	90.00	178.85	8,175.00	-3,970.12	79.43	3,970.92	0.00	0.00	0.00
12,000.00	90.00	178.85	8,175.00	-4,070.10	81.43	4,070.92	0.00	0.00	0.00
12,100.00	90.00	178.85	8,175.00	-4,170.08	83.43	4,170.92	0.00	0.00	0.00
12,200.00	90.00	178.85	8,175.00	-4,270.06	85.43	4,270.92	0.00	0.00	0.00
12,300.00	90.00	178.85	8,175.00	-4,370.04	87.43	4,370.92	0.00	0.00	0.00
12,400.00	90.00	178.85	8,175.00	-4,470.02	89.43	4,470.92	0.00	0.00	0.00
12,500.00	90.00	178.85	8,175.00	-4,570.00	91.43	4,570.92	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 424H
Company:	DEVON ENERGY	**TVD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Project:	Eddy County, NM (NAD-83)	**MD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Site:	Cotton Draw 14-23 Fed Com	**North Reference:**	Grid
Well:	424H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,600.00	90.00	178.85	8,175.00	-4,669.98	93.43	4,670.92	0.00	0.00	0.00
12,700.00	90.00	178.85	8,175.00	-4,769.96	95.43	4,770.92	0.00	0.00	0.00
12,800.00	90.00	178.85	8,175.00	-4,869.94	97.43	4,870.92	0.00	0.00	0.00
12,900.00	90.00	178.85	8,175.00	-4,969.92	99.43	4,970.92	0.00	0.00	0.00
13,000.00	90.00	178.85	8,175.00	-5,069.90	101.43	5,070.92	0.00	0.00	0.00
13,100.00	90.00	178.85	8,175.00	-5,169.88	103.43	5,170.92	0.00	0.00	0.00
13,200.00	90.00	178.85	8,175.00	-5,269.86	105.43	5,270.92	0.00	0.00	0.00
13,300.00	90.00	178.85	8,175.00	-5,369.84	107.43	5,370.92	0.00	0.00	0.00
13,400.00	90.00	178.85	8,175.00	-5,469.82	109.43	5,470.92	0.00	0.00	0.00
13,500.00	90.00	178.85	8,175.00	-5,569.80	111.43	5,570.92	0.00	0.00	0.00
13,600.00	90.00	178.85	8,175.00	-5,669.78	113.43	5,670.92	0.00	0.00	0.00
13,700.00	90.00	178.85	8,175.00	-5,769.76	115.43	5,770.92	0.00	0.00	0.00
13,800.00	90.00	178.85	8,175.00	-5,869.74	117.43	5,870.92	0.00	0.00	0.00
13,900.00	90.00	178.85	8,175.00	-5,969.72	119.43	5,970.92	0.00	0.00	0.00
14,000.00	90.00	178.85	8,175.00	-6,069.70	121.43	6,070.92	0.00	0.00	0.00
14,100.00	90.00	178.85	8,175.00	-6,169.68	123.43	6,170.92	0.00	0.00	0.00
14,200.00	90.00	178.85	8,175.00	-6,269.66	125.43	6,270.92	0.00	0.00	0.00
14,300.00	90.00	178.85	8,175.00	-6,369.64	127.43	6,370.92	0.00	0.00	0.00
14,400.00	90.00	178.85	8,175.00	-6,469.62	129.43	6,470.92	0.00	0.00	0.00
14,500.00	90.00	178.85	8,175.00	-6,569.60	131.43	6,570.92	0.00	0.00	0.00
14,600.00	90.00	178.85	8,175.00	-6,669.58	133.44	6,670.92	0.00	0.00	0.00
14,700.00	90.00	178.85	8,175.00	-6,769.56	135.44	6,770.92	0.00	0.00	0.00
14,800.00	90.00	178.85	8,175.00	-6,869.54	137.44	6,870.92	0.00	0.00	0.00
14,900.00	90.00	178.85	8,175.00	-6,969.52	139.44	6,970.92	0.00	0.00	0.00
15,000.00	90.00	178.85	8,175.00	-7,069.50	141.44	7,070.92	0.00	0.00	0.00
15,100.00	90.00	178.85	8,175.00	-7,169.48	143.44	7,170.92	0.00	0.00	0.00
15,145.18	90.00	178.85	8,175.00	-7,214.65	144.34	7,216.09	0.00	0.00	0.00
TD - PBHL (CD14-23FC 424H)									

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
SHL (CD14-23FC 424H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	413,905.42	724,183.90	32° 8' 11.495 N	103° 44' 33.400 W
KOP (CD14-23 FC 424H - plan hits target center - Point	0.00	0.00	7,602.04	0.00	0.00	413,905.42	724,183.90	32° 8' 11.495 N	103° 44' 33.400 W
PBHL (CD14-23FC 424H - plan hits target center - Point	0.00	0.00	8,175.00	-7,214.65	144.34	406,690.77	724,328.24	32° 7' 0.093 N	103° 44' 32.182 W
POE (CD14-23FC 424H - plan hits target center - Point	0.00	0.00	8,175.00	-572.84	11.46	413,332.58	724,195.36	32° 8' 5.826 N	103° 44' 33.303 W

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well 424H
Company:	DEVON ENERGY	**TVD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Project:	Eddy County, NM (NAD-83)	**MD Reference:**	3415.1' GE + 25' KB @ 3440.10usft
Site:	Cotton Draw 14-23 Fed Com	**North Reference:**	Grid
Well:	424H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
675.00	675.00	Rustler		0.00	
965.00	965.00	Salado		0.00	
980.00	980.00	Top of Salt		0.00	
4,165.00	4,165.00	Base of Salt		0.00	
4,386.00	4,386.00	Delaware		0.00	
4,419.00	4,419.00	Bell Canyon		0.00	
5,365.00	5,365.00	Cherry Canyon		0.00	
6,676.00	6,676.00	Brushy Canyon		0.00	
7,896.84	7,884.00	Madera		0.00	
8,185.96	8,090.00	Lower Brushy Canyon		0.00	
8,502.04	8,175.00	D Sand Target Top		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
7,602.04	7,602.04	0.00	0.00	KOP 10° DLS
8,502.04	8,175.00	-572.84	11.46	LP
15,145.18	8,175.00	-7,214.65	144.34	TD

devon

Project: Eddy County, NM (NAD-83)
Site: Cotton Draw 14-23 Fed Com
Well: 424H
Wellbore: OH
Design: Plan #1

T G M

Azimuths to Grid North
True North: -0.31°
Magnetic North: 6.64°

Magnetic Field
Strength: 48140.4snT
Dip Angle: 59.90°
Date: 8/8/2016
Model: HDGM

LEAM Drilling Systems LLC

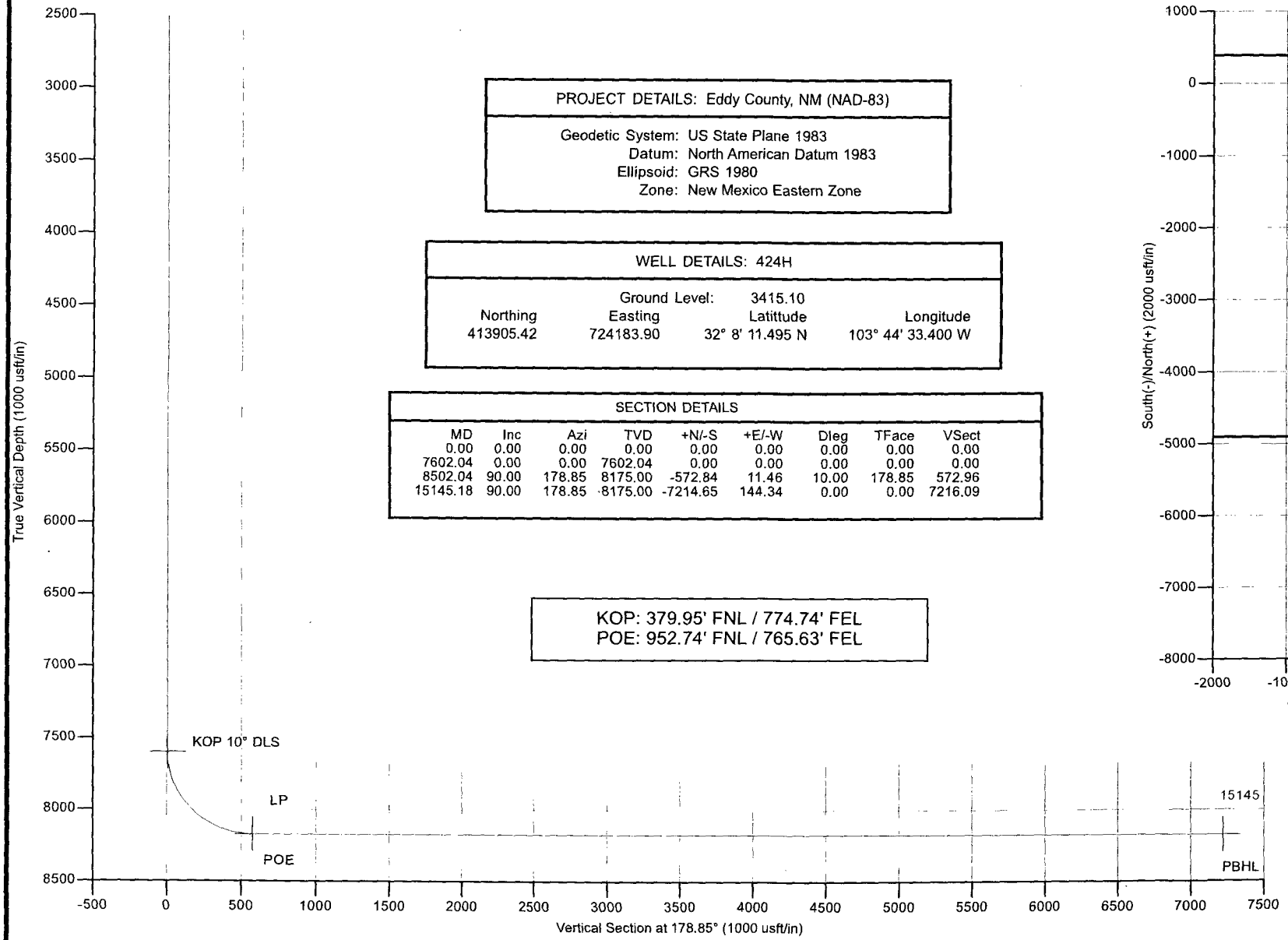
PROJECT DETAILS: Eddy County, NM (NAD-83)	
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone

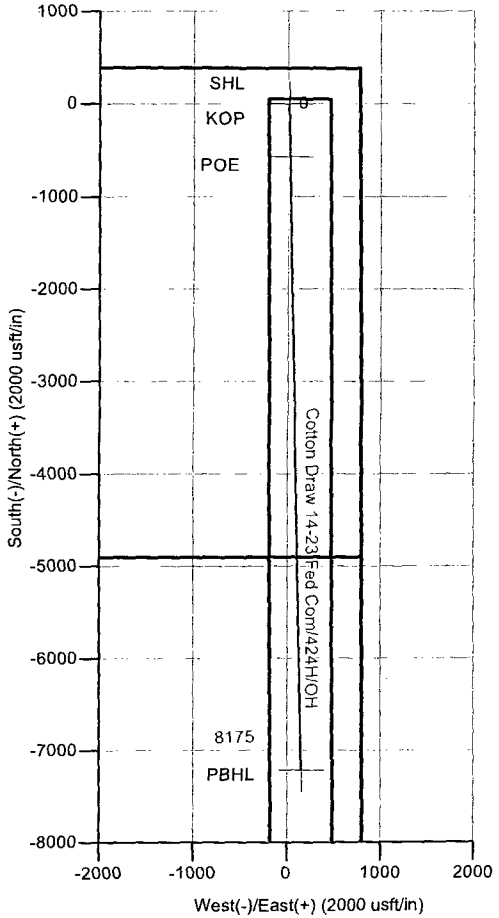
WELL DETAILS: 424H			
Ground Level:	3415.10		
Northing	Easting	Latittude	Longitude
413905.42	724183.90	32° 8' 11.495 N	103° 44' 33.400 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7602.04	0.00	0.00	7602.04	0.00	0.00	0.00	0.00	0.00
8502.04	90.00	178.85	8175.00	-572.84	11.46	10.00	178.85	572.96
15145.18	90.00	178.85	8175.00	-7214.65	144.34	0.00	0.00	7216.09

KOP: 379.95' FNL / 774.74' FEL
POE: 952.74' FNL / 765.63' FEL





Cotton Draw Unit 291H

Casing Assumptions and Load Cases

Surface

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Surface Casing Burst Design		
Load Case	**External Pressure**	**Internal Pressure**
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Displace to Gas	Formation Pore Pressure	Dry gas from next casing point

Surface Casing Collapse Design		
Load Case	**External Pressure**	**Internal Pressure**
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

Surface Casing Tension Design	
Load Case	**Assumptions**
Overpull	100kips
Runing in hole	3 ft/s
Service Loads	N/A

Cotton Draw Unit 291H

Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Intermediate Casing Burst Design		
Load Case	**External Pressure**	**Internal Pressure**
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Fracture @ Shoe	Formation Pore Pressure	Dry gas

Intermediate Casing Collapse Design		
Load Case	**External Pressure**	**Internal Pressure**
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

Intermediate Casing Tension Design	
Load Case	**Assumptions**
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

Cotton Draw Unit 291H

Casing Assumptions and Load Cases

Production

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Production Casing Burst Design		
Load Case	**External Pressure**	**Internal Pressure**
Pressure Test	Formation Pore Pressure	Fluid in hole (water or produced water) + test psi
Tubing Leak	Formation Pore Pressure	Packer @ KOP, leak below surface 8.6 ppg packer fluid
Stimulation	Formation Pore Pressure	Max frac pressure with heaviest frac fluid

Production Casing Collapse Design		
Load Case	**External Pressure**	**Internal Pressure**
Full Evacuation	Water gradient in cement, mud above TOC.	None
Cementing	Wet cement weight	Water (8.33ppg)

Production Casing Tension Design	
Load Case	**Assumptions**
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

Production Cement Contingency

Additional Info for String	3	Additional String Description	
Stage Tool Depth	4240		

Lead

Top MD of Segment	4040	Btm MD of Segment	4140	Cement Type	C
Additives	Enhancer 923 + 10% BWOC Bentonite + 0.05% BWOC SA-1015 + 0.3% BWOC HR-800 + 0.2% BWOC FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5 lb/sk D-Air 5000	Quanity (sks)	20	Yield (cu.ft./sk)	3.31
Density (lbs/gal)	10.9	Volume (cu.ft.)	66	Percent Excess	25

Tail

Top MD of Segment	4140	Top MD of Segment	4240	Cement Type	H
Additives	0.125 lbs/sack Poly-E-Flake	Quanity (sks)	30	Yield (cu.ft./sk)	1.33
Density (lbs/gal)	14.8	Volume (cu.ft.)	39	Percent Excess	25

Production Cement Contingency

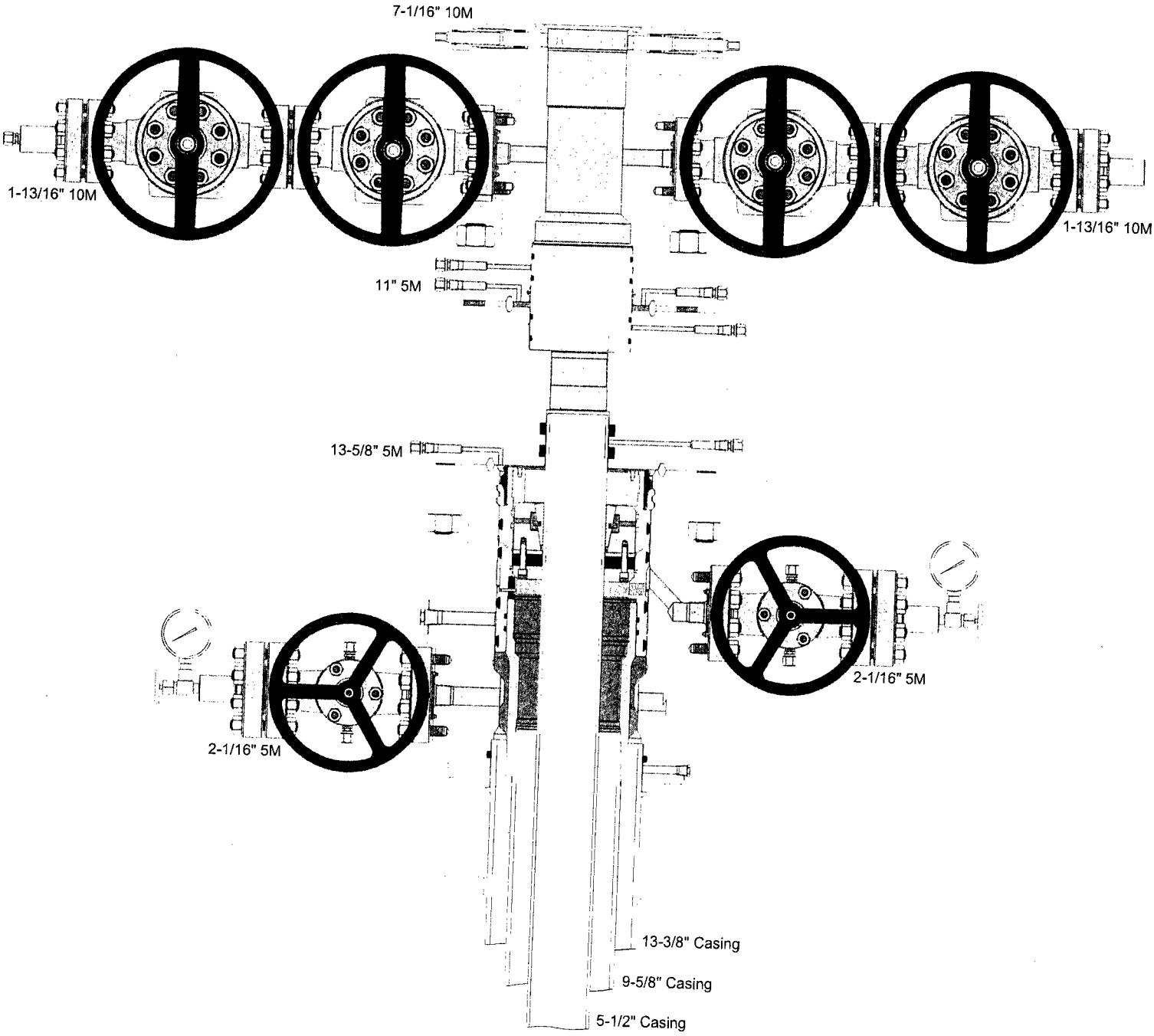
Additional Info for String	3	Additional String Description	
Stage Tool Depth	4240		

Lead

Top MD of Segment	4240	Btm MD of Segment	8100	Cement Type	C
Additives	Enhancer 923 + 10% BWOC Bentonite + 0.05% BWOC SA-1015 + 0.3% BWOC HR-800 + 0.2% BWOC FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5 lb/sk D-Air 5000	Quanity (sks)	340	Yield (cu.ft./sk)	3.31
Density (lbs/gal)	10.9	Volume (cu.ft.)	1125	Percent Excess	25

Tail

Top MD of Segment	8100	Top MD of Segment	15145	Cement Type	H
Additives	Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite	Quanity (sks)	1920	Yield (cu.ft./sk)	1.2
Density (lbs/gal)	14.5	Volume (cu.ft.)	2302	Percent Excess	25


7-1/16" 10M
1-13/16" 10M
1-13/16" 10M
11" 5M
13-5/8" 5M
2-1/16" 5M
2-1/16" 5M
13-3/8" Casing
9-5/8" Casing
5-1/2" Casing

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.
After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.

Continental CONTITECH

Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly it is good practice to use lifting & safety equipment but not mandatory

Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com

RIG 212

PHOENIX

QUALITY DOCUMENT

PHOENIX RUBBER INDUSTRIAL LTD.

6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26
Phone: (361) 456-4200 · Fax: (361) 217-2972, 456-4273 · www.taurusemerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 552
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID		Choke and Kill Hose
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH:		11,43 m
W.P. 68,96 MPa	10000 psi	T.P. 103,4 MPa	15000 psi	Duration: 60 min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.
→ 10 mm = 25 MPa

COUPLINGS

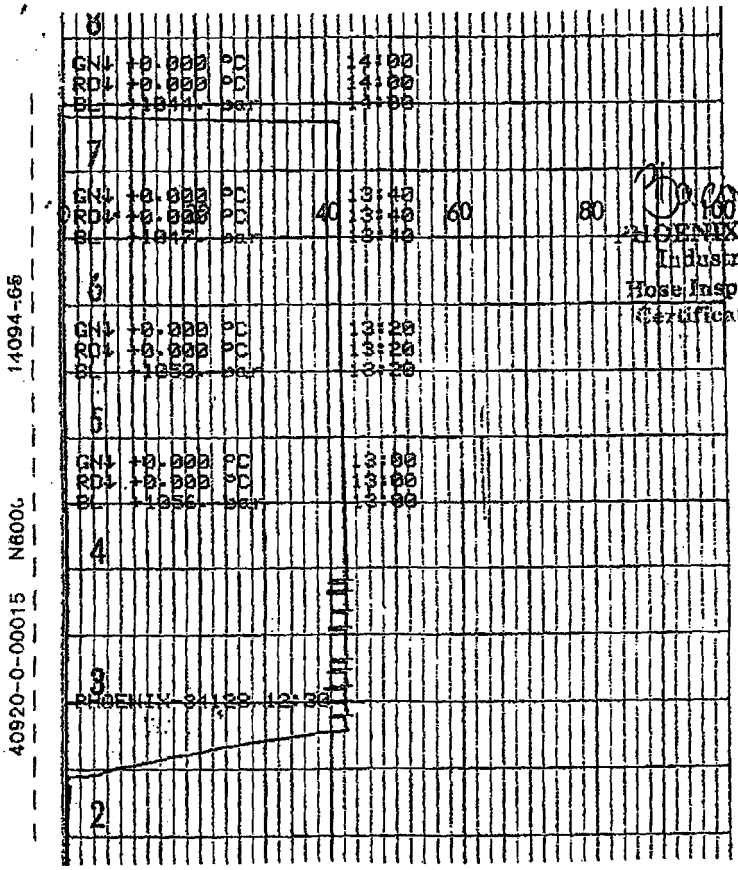
Type	Serial N°	Quality	Heat N°
3" coupling with 4 1/16" Flange end	720 719	AISI 4130 AISI 4130	C7626 47357

API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

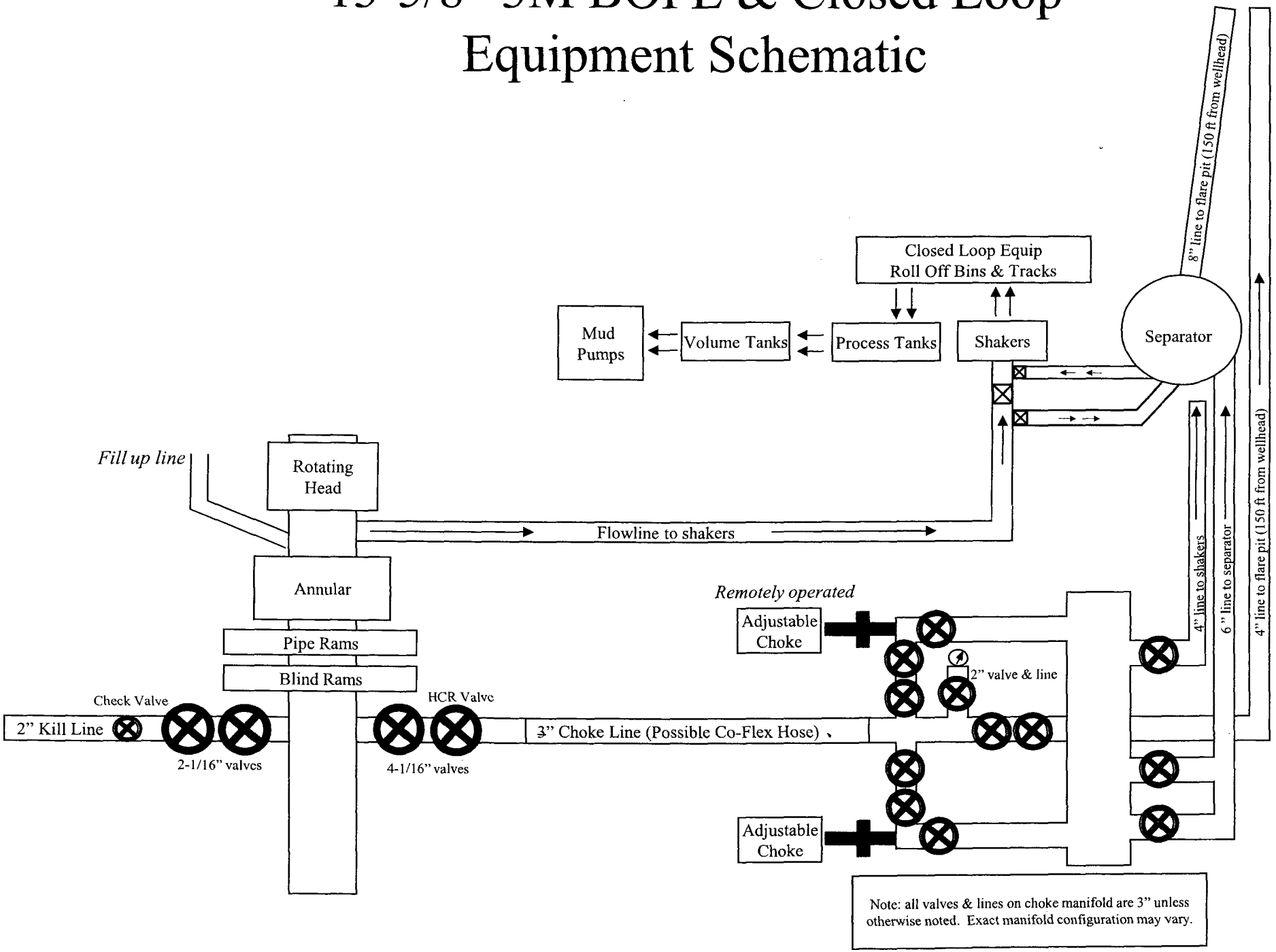
Date:	Inspector	Quality Control
29. April. 2002.		PHOENIX RUBBER Industrial Ltd. Hose Inspection and Certification Dept. CERTIFIED TRUE COPY PHOENIX RUBBER Q.C.



PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE COPY
PHOENIX RUBBER I.C.

13-5/8" 3M BOPE & Closed Loop Equipment Schematic



devon

Devon Energy Center
333 West Sheridan Avenue
Oklahoma City, Oklahoma 73102-5015

Hydrogen Sulfide (H_2S) Contingency Plan

For

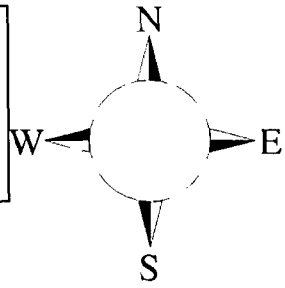
Cotton Draw 14-23 Fed Com 424H

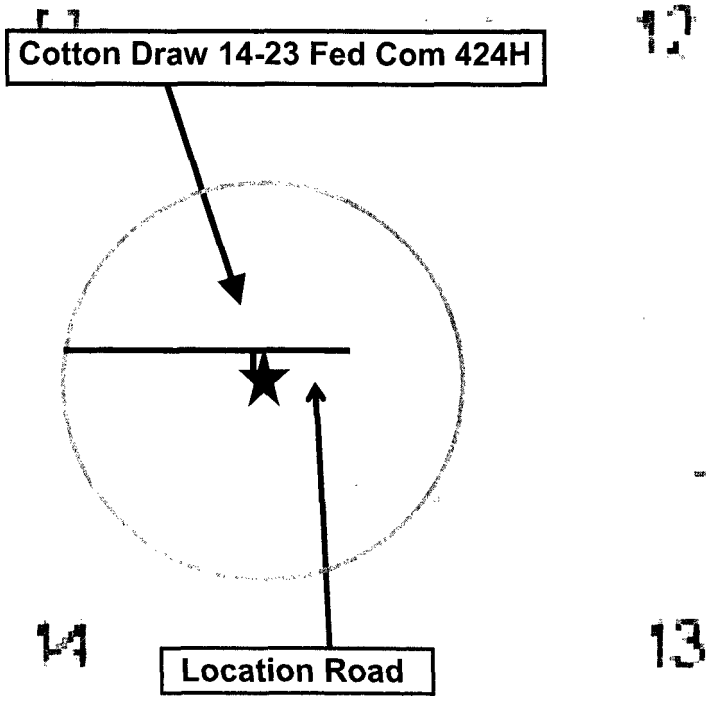
Sec-14 T-25S R-31E
380' FNL & 775' FEL
LAT. = 32.1365264' N (NAD83)
LONG = 103.7426111' W

Eddy County NM

Cotton Draw 14-23 Fed Com 424H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.





Assumed 100 ppm ROE = 3000' Radius of Exposure
100 ppm H2S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H_2S 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 there 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

Devon Energy Corp. 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. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H_2S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S)

2. The proper use and maintenance of personal protective equipment and life support systems.

3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H_2S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

3. The contents and requirements of the H_2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

   D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

   E. Mud/Gas Separator

2. **Protective equipment for essential personnel:**

   30-minute SCBA units located at briefing areas, as indicated on well site diagram, with one escape unit available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. **H_2S detection and monitoring equipment:**

   Portable H_2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H_2S levels reach 10 ppm and audible sirens which activate at 10 ppm. Sensor locations:

   - Bell nipple
   - Shale shaker
   - Trip tank
   - Suction pit
   - Rig floor
   - Cellar
   - Choke manifold
   - Living Quarters (usually the company man's trailer stairs.)

   Visual warning systems:

   A. Wind direction indicators as shown on well site diagram

   B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

4. Mud program:

The mud program has been designed to minimize the volume of H_2S circulated to surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

5. Metallurgy:

A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H_2S trim.

B. All elastomers used for packing and seals shall be H_2S trim.

6. Communication:

A. Company personnel have/use cellular telephones in the field.

B. Land line (telephone) communications at Office

7. Well testing:

A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H_2S environment will use the closed chamber method of testing.

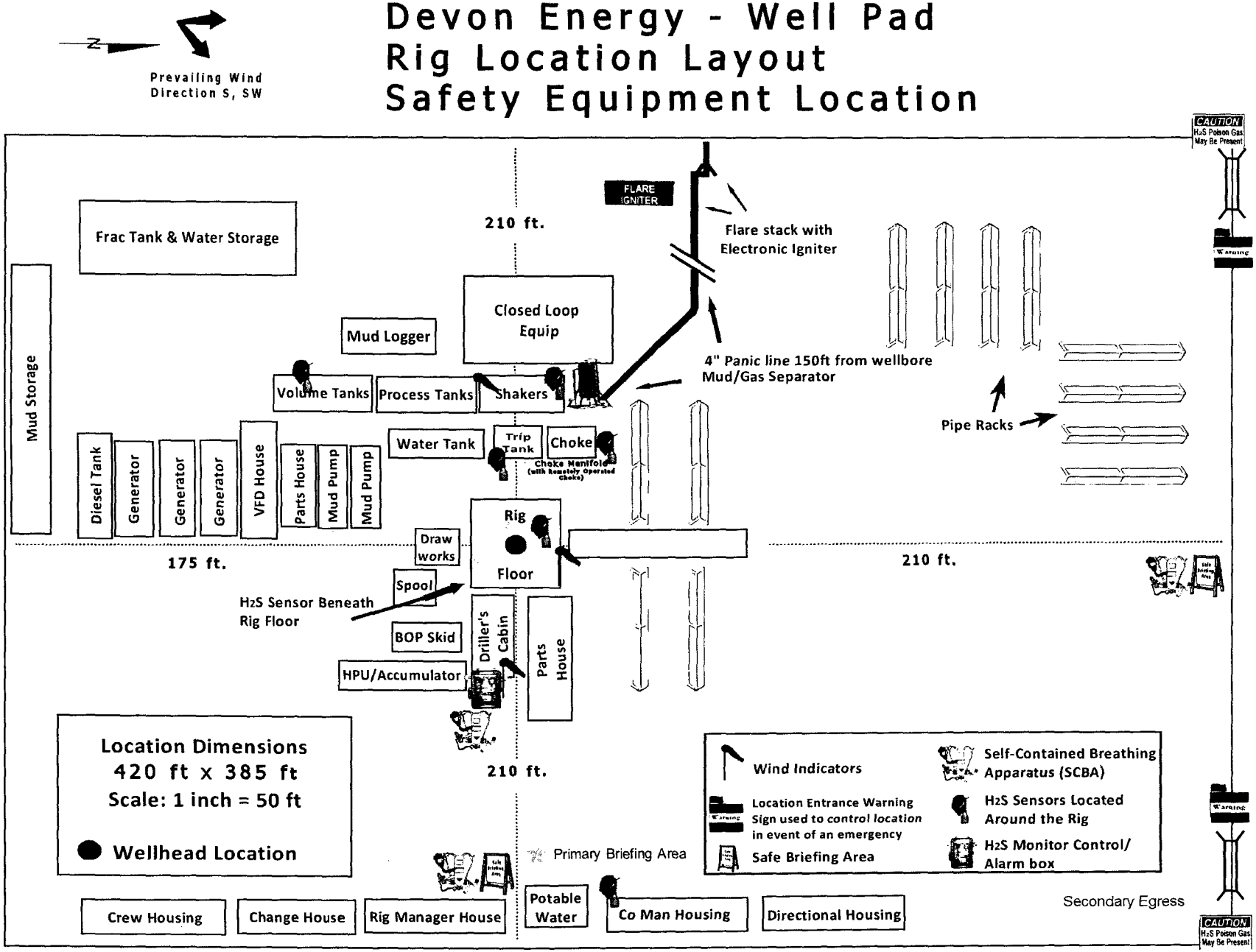
B. There will be no drill stem testing.

Devon Energy Corp. Company Call List		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
Drilling Supervisor – Slope – Norman Naill		405-760-7234
EHS Professional – Mark Hurst		575-513-9087
Agency Call List		
Lea County (575)	**Hobbs**	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	Ambulance	**911**
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
Eddy County (575)	**Carlsbad**	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	Ambulance	**911**
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	887-6544
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	Emergency Services	
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control (915) 699-0139	(915) 563-3356
	Halliburton	(575) 746-2757
	B. J. Services	(575) 746-3569
Give GPS position:	Native Air – Emergency Helicopter – Hobbs	(575) 392-6429
	Flight For Life - Lubbock, TX	(806) 743-9911
	Aerocare - Lubbock, TX	(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM	(800) 222-1222
	Poison Control (24/7)	(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov	

Prepared in conjunction with
Dave Small

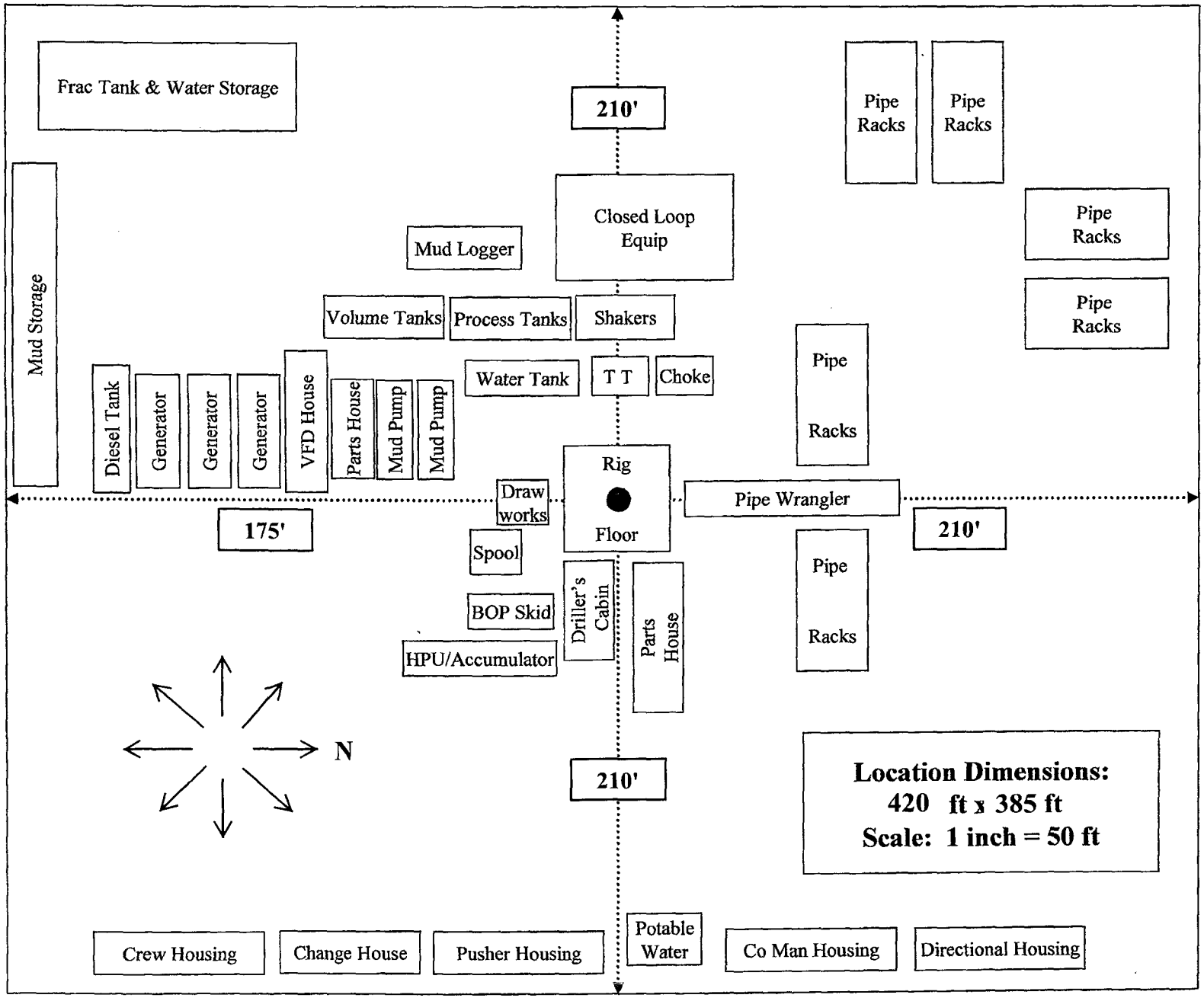
SHARP
COMMUNICATIONS & CONSULTING, LLC

Devon Energy - Well Pad
Rig Location Layout
Safety Equipment Location

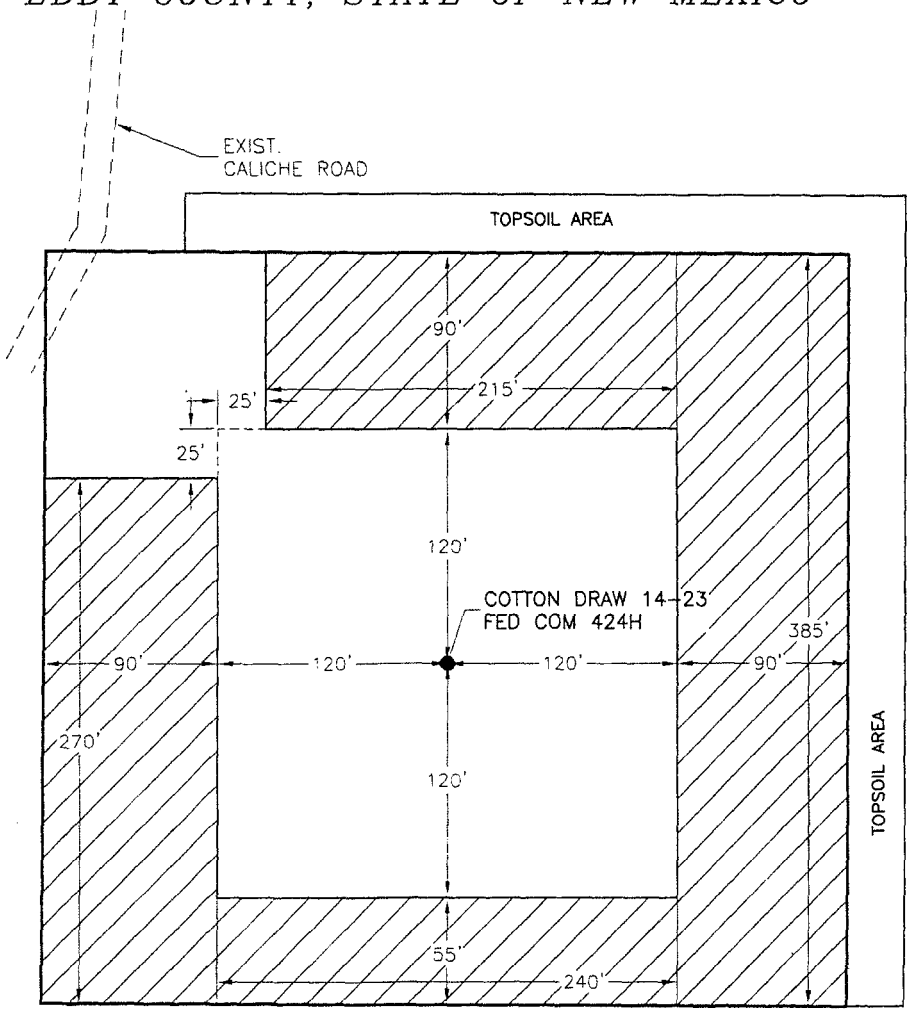


Rig Location Layout

COTTON DRAW 14-23 FED COM 424H



PROPOSED INTERIM SITE RECLAMATION
FOR COTTON DRAW 14-23 FED COM 424H
SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



DENOTES
RECLAMATION AREA

2.102± ACRES RECLAMATION AREA

010 50 100 200
SCALE 1" = 100'

DEVON ENERGY PRODUCTION COMPANY, L.P.
COTTON DRAW 14-23 FED COM 424H
LOCATED 380 FT. FROM THE NORTH LINE
AND 775 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 25 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

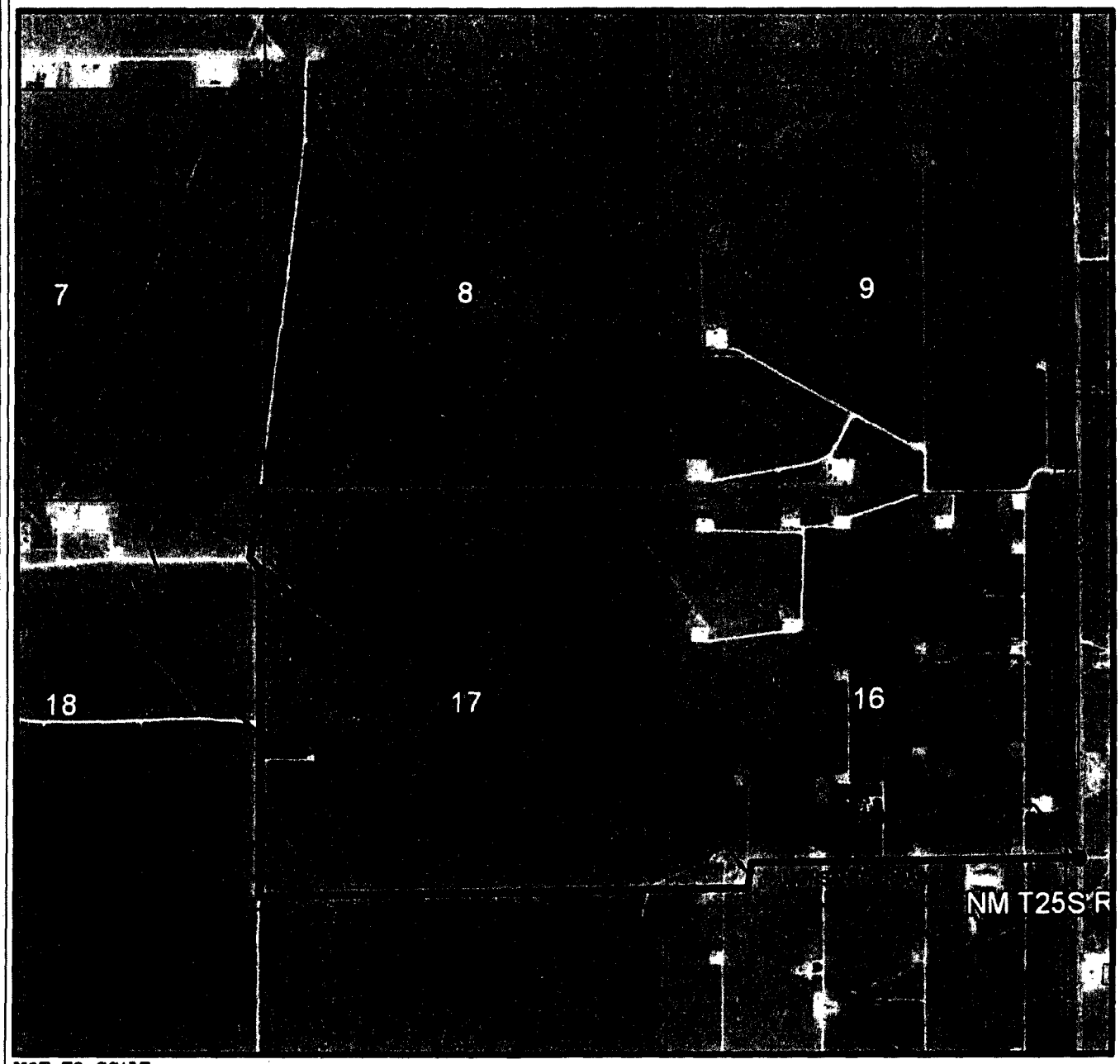
JUNE 20, 2016

SURVEY NO. 4656

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 *CARLSBAD, NEW MEXICO*

SECTION 18, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
APR. 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.

COTTON DRAW UNIT 288H

LOCATED 175 FT. FROM THE NORTH LINE
AND 1680 FT. FROM THE EAST LINE OF
SECTION 18, TOWNSHIP 25 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 13, 2016

SURVEY NO. 3942B

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

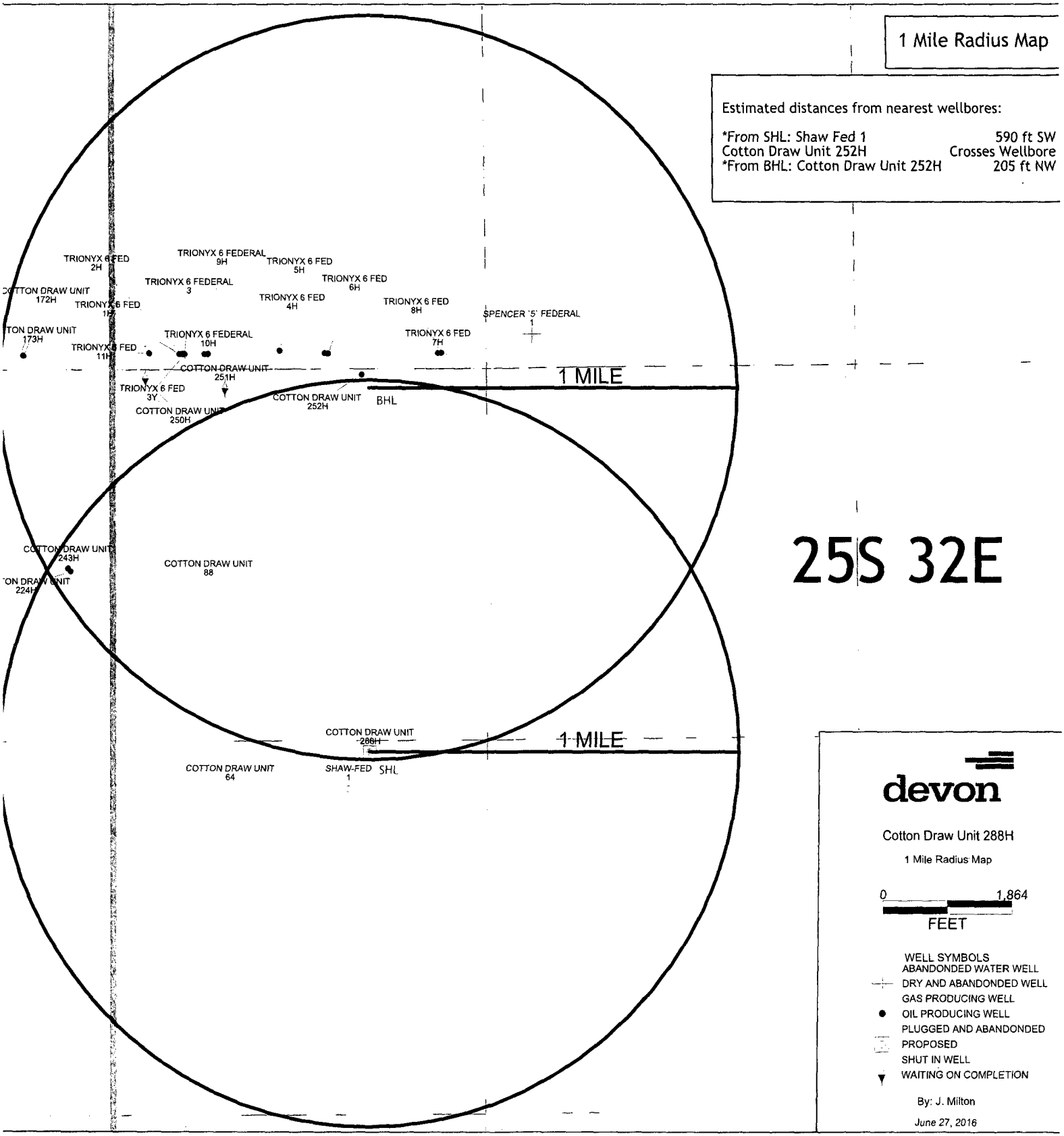


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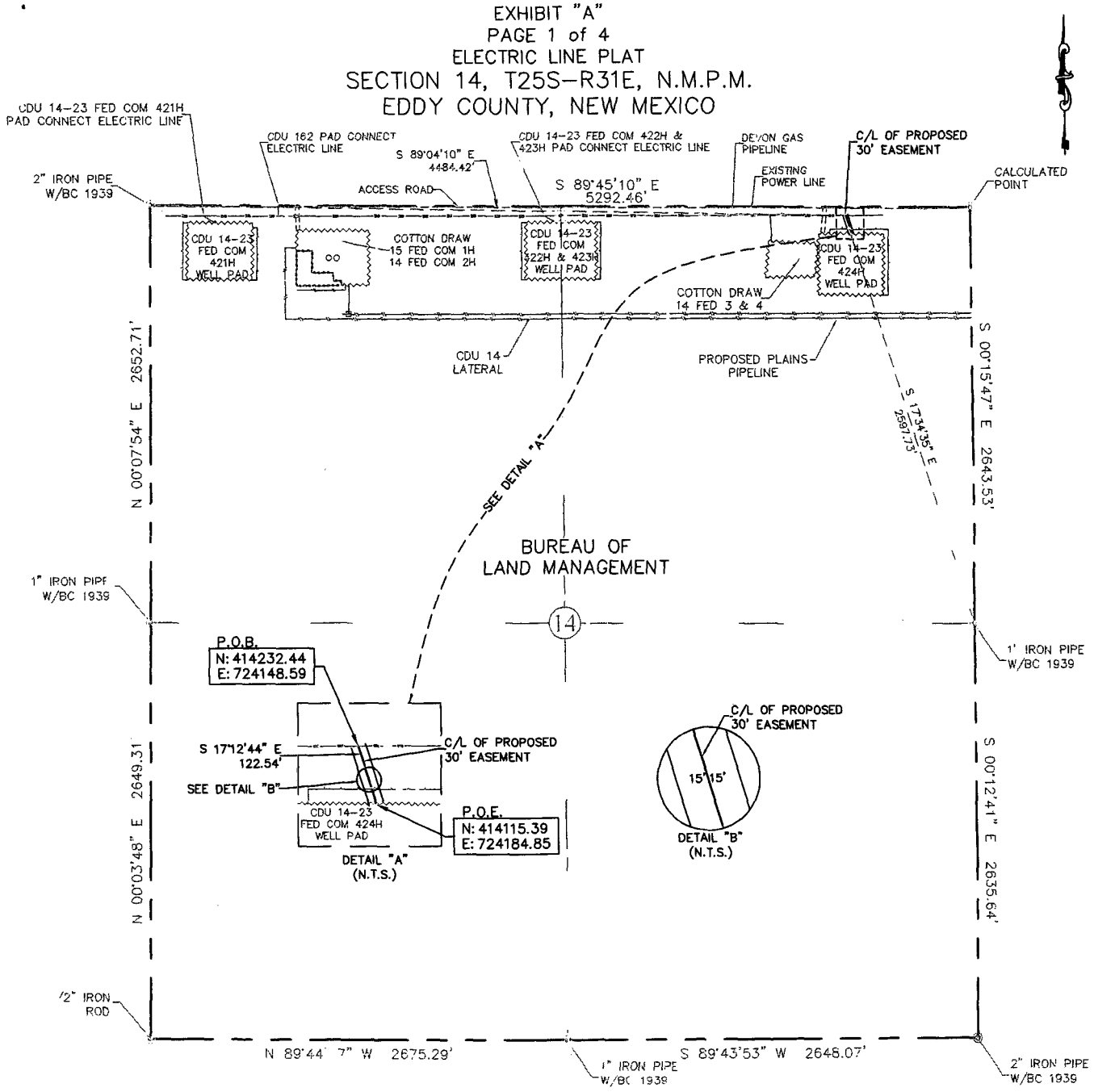
EXHIBIT "A"
PAGE 1 of 4
ELECTRIC LINE PLAT
SECTION 14, T25S–R31E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



30' EASEMENT AREA = 0.084 ACRE(S)
122.54 FEET OR 7.43 RODS

0+00.0 P.O.B./EXISTING POWER LINE
1+22.5 P.O.E./STAKED POWER POLE/
CDU 14–23 FED COM 424H WELL PAD

SEE THE ATTACHED LEGAL DESCRIPTION
Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

0 1000 2000

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to represent an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. LAMAN NEW MEXICO 22404 PROFESSIONAL SURVEYOR

B.L. Laman PLS #22404
Date Signed: 08–01–2016
Horizonrow, LLC
571 State Street Jasper, TX. 75951
(409) 202–5111
Employee of Horizonrow, LLC

HORIZON ROW LLC	DEVON ENERGY PRODUCTION COMPANY, L.P.	LINE NUMBER: EL7855
Drawn for: devon	CDU 14–23 FED COM 424H PAD CONNECT ELECTRIC LINE	WBS NUMBER: CC–112971.AL
		SCALE: 1" = 1000'
Drawn by: CHRIS MAAS	Date: 07/26/2016	PROPOSED 30' EASEMENT ON THE PROPERTY OF BUREAU OF LAND MANAGEMENT SECTION 14, T25S–R31E, N.M.P.M.	REVISIONS:
			SHEET: 1 OF 4

SECTION 14, T25S-R31E, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

ELECTRIC LINE PLAT

LEGAL DESCRIPTION

FOR

DEVON ENERGY PRODUCTION COMPANY, L.P.

BUREAU OF LAND MANAGEMENT

30' EASEMENT DESCRIPTION:

BEING an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the northeast quarter (NE 1/4) of Section 14, Township 25 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 2" iron pipe w/ BC 1939 for the northwest corner of Section 14, T25S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence S 89°04'10" E a distance of 4484.42' to the **Point of Beginning** of this easement having coordinates of Northing=414232.44 feet, Easting=724148.89 feet and continuing the following course;

Thence S 17°12'44" E a distance of 122.54' to the **Point of Ending** having coordinates of Northing=414115.39 feet, Easting=724184.85 feet from said point a 1" iron pipe w/ BC 1939 for the east quarter corner of Section 14, T25S-R31E bears S 17°34'35" E a distance of 2597.73', covering **122.54' or 7.43 rods** and having an area of **0.084 acres**.

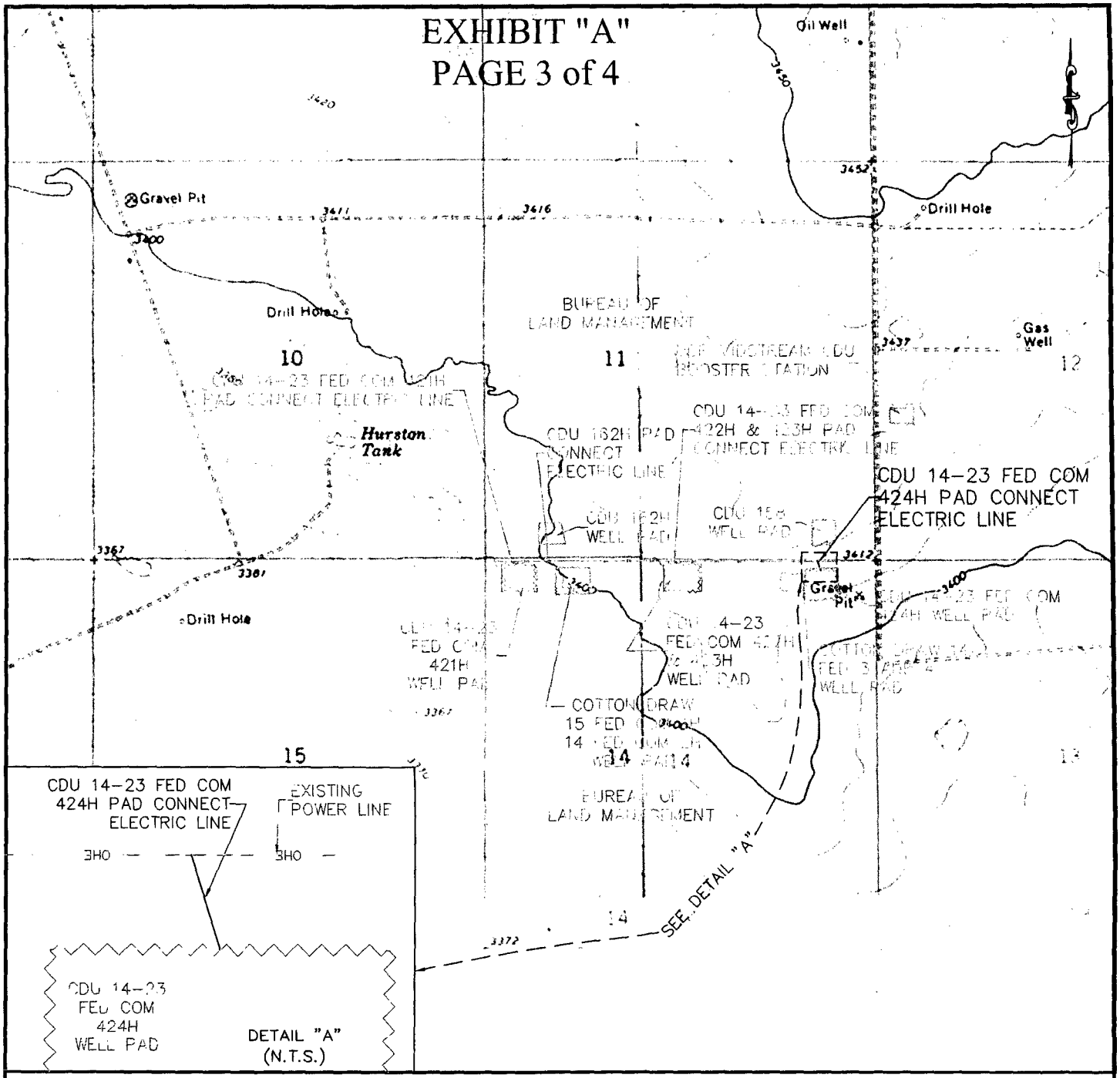
NOTES:

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 08/01/2016
Horizon Row, LLC
571 State Street, Jasper, TX
(409) 202-5111 75951
Employee of Horizon Row, LLC

EXHIBIT "A"
PAGE 3 of 4

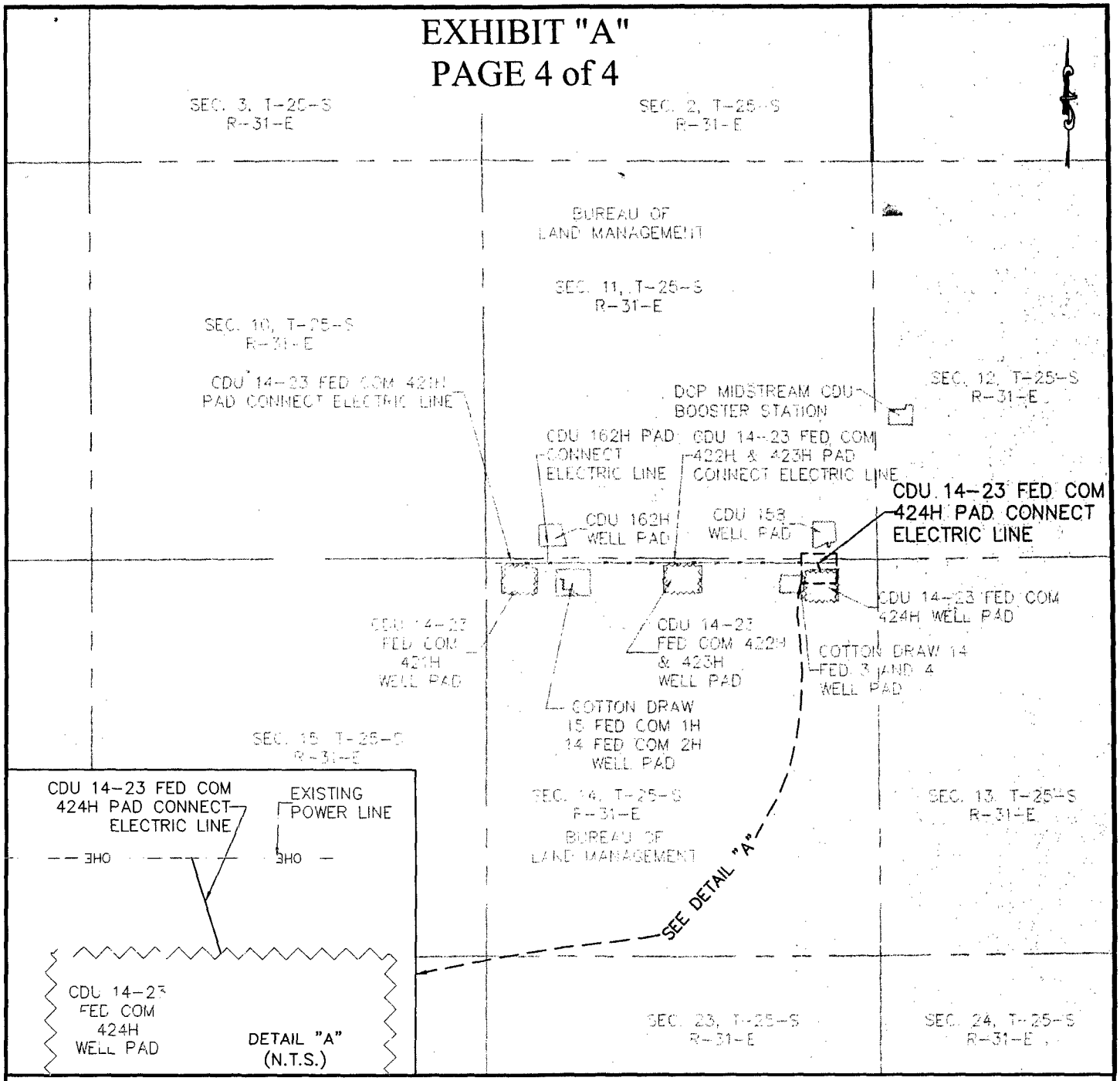


QUAD MAP

SECTION 14, T25S-R31E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

HORIZON ROW LLC	Drawn for:		LINE NUMBER: EL7855
DEVON ENERGY PRODUCTION CO., L.P.			WBS NUMBER: CC-112971.AL
PROPOSED 30' EASEMENT			SCALE: 1" = 2000'
Drawn by: CHRIS MAAS	Date: 07/26/2016	devon	REVISIONS:
			SHEET: 3 OF 4

EXHIBIT "A"
PAGE 4 of 4



AERIAL MAP

SECTION 14, T25S-R31E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

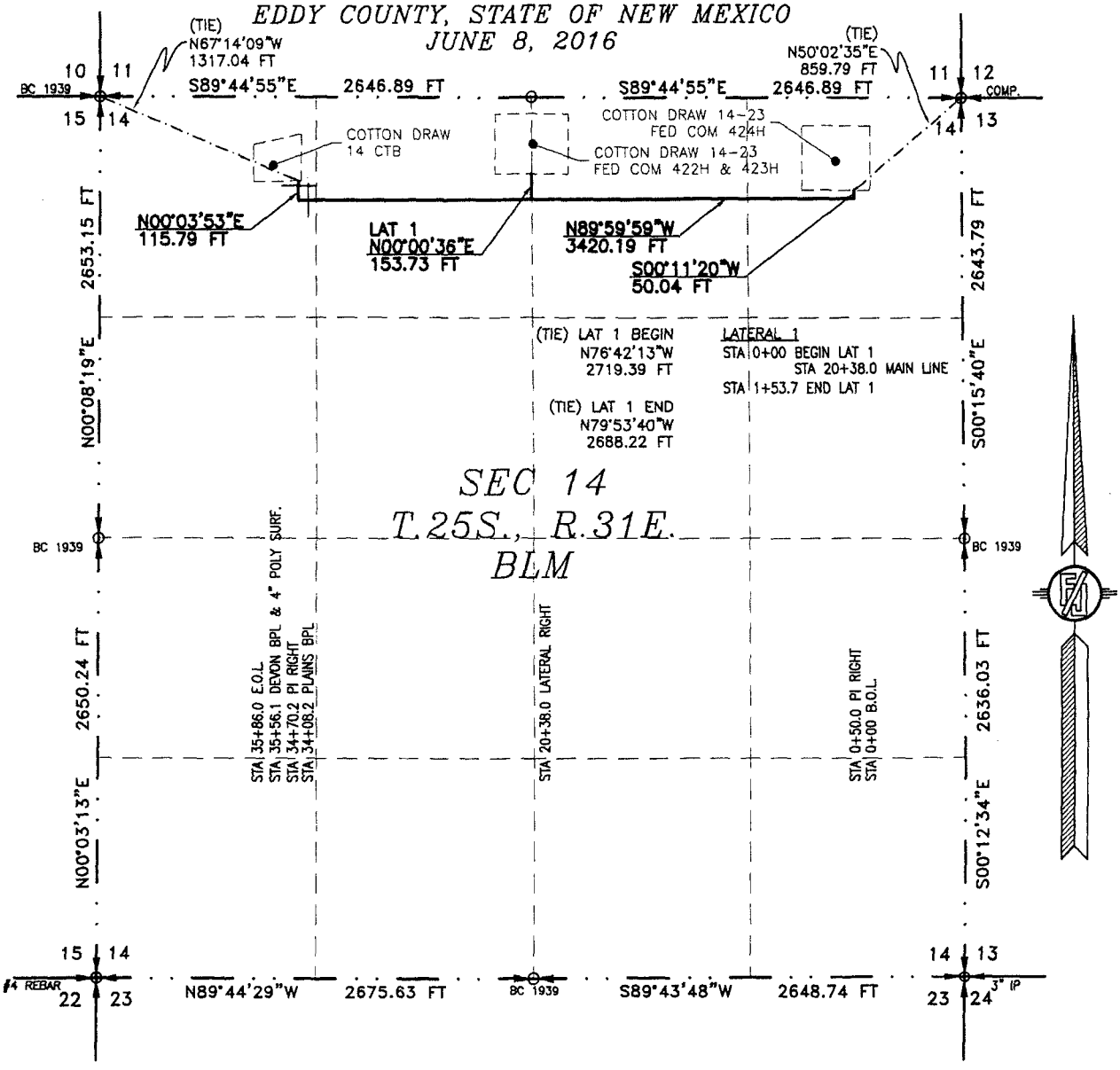
HORIZON ROW LLC	Drawn for:	LINE NUMBER: EL7855
DEVON ENERGY PRODUCTION CO., L.P.	devon	WBS NUMBER: CC-112971.AL
PROPOSED 30' EASEMENT		SCALE: 1" = 2000'
Drawn by: CHRIS MAAS / Date: 07/26/2016		REVISIONS:
		SHEET: 4 OF 4

FLOWLINE PLAT (400681XYZ)

THREE 6" GAS LIFT LINES & THREE 6" FLOWLINES (BURIED IN SAME TRENCH) FROM THE COTTON DRAW 14-23 FED COM 424H & THE COTTON DRAW 14-23 FED COM 422H & 423H TO THE COTTON DRAW 14 CTB

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JUNE 8, 2016



SEE NEXT SHEET (2-4) FOR DESCRIPTION

1000 0 1000

Scale: 1" = 1000'

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 28 DAY OF JUNE 2016

FILIMON F. JARAMILLO PLS. 12797

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 1-4

SURVEY NO. 4753

FLOWLINE PLAT (400681XYZ)

THREE 6" GAS LIFT LINES & THREE 6" FLOWLINES (BURIED IN SAME TRENCH) FROM THE COTTON DRAW 14-23 FED COM 424H & THE COTTON DRAW 14-23 FED COM 422H & 423H TO THE COTTON DRAW 14 CTB

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JUNE 8, 2016

DESCRIPTION

A STRIP OF LAND 50 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 25 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

MAIN LINE

BEGINNING AT A POINT WITHIN THE NE/4 NE/4 OF SAID SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N50°02'35"E, A DISTANCE OF 859.79 FEET;
THENCE S00°11'20"W A DISTANCE OF 50.04 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N89°59'59"W A DISTANCE OF 3420.19 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N00°03'53"E A DISTANCE OF 115.79 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N67°14'09"W, A DISTANCE OF 1317.04 FEET;

SAID STRIP OF LAND BEING 3586.02 FEET OR 217.34 RODS IN LENGTH, CONTAINING 4.116 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NE/4	711.73 L.F.	43.14 RODS	0.817 ACRES
NW/4 NE/4	1323.66 L.F.	80.22 RODS	1.519 ACRES
NE/4 NW/4	1325.32 L.F.	80.32 RODS	1.521 ACRES
NW/4 NW/4	225.31 L.F.	13.66 RODS	0.259 ACRES

LATERAL 1

BEGINNING AT A POINT WITHIN THE NE/4 NW/4 OF SAID SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N76°42'13"W, A DISTANCE OF 2719.39 FEET;
THENCE N00°00'36"E A DISTANCE OF 153.73 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N79°53'40"W, A DISTANCE OF 2688.22 FEET;

SAID STRIP OF LAND BEING 153.73 FEET OR 9.32 RODS IN LENGTH, CONTAINING 0.176 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NW/4	153.73 L.F.	9.32 RODS	0.176 ACRES

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 22 DAY OF JUNE 2016

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

FILIMON F. JARAMILLO PLS. 12797

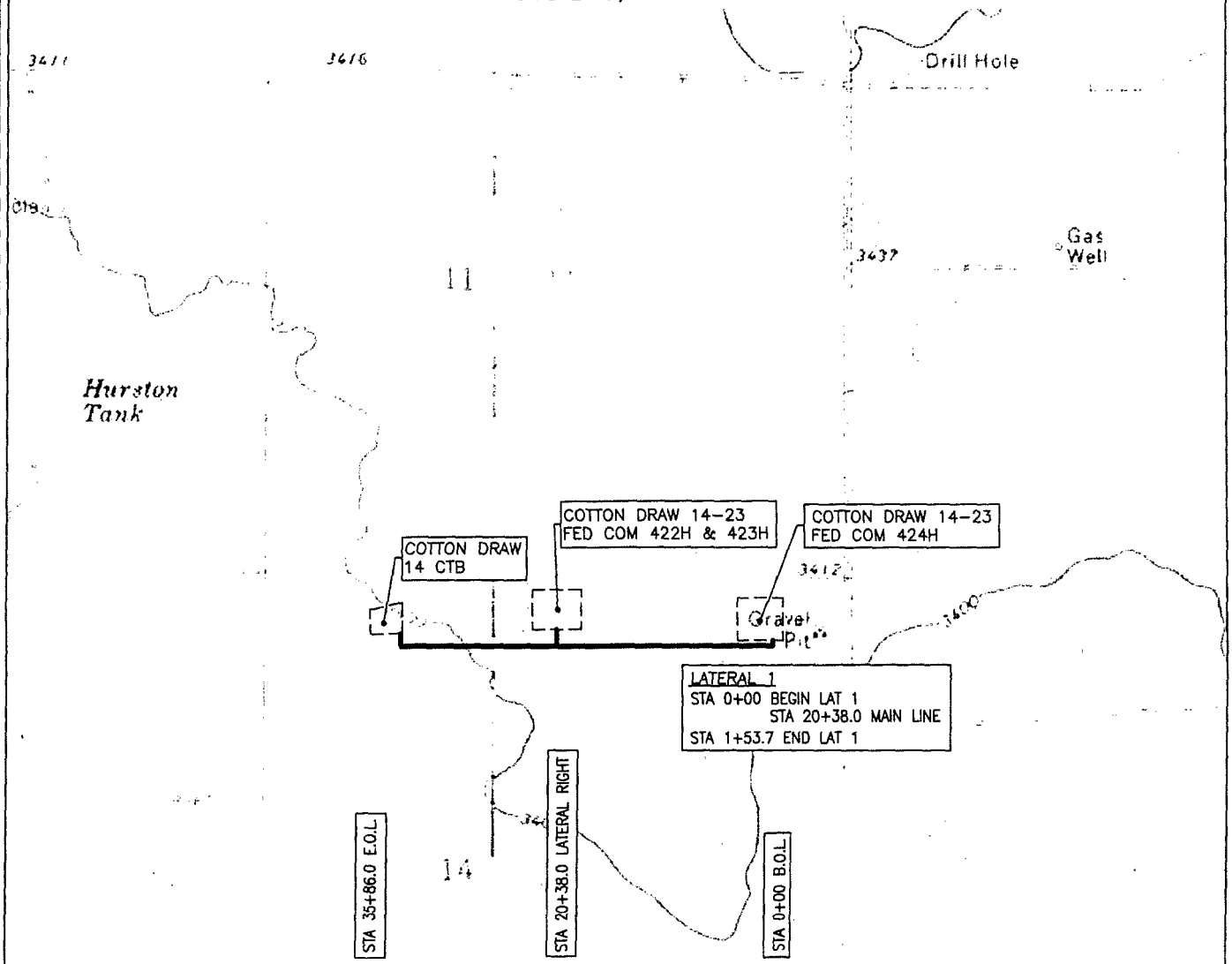
301 SOUTH CANAL
(575) 234-3341

FLOWLINE PLAT (400681XYZ)

THREE 6" GAS LIFT LINES & THREE 6" FLOWLINES (BURIED IN SAME TRENCH) FROM THE COTTON DRAW 14-23 FED COM 424H & THE COTTON DRAW 14-23 FED COM 422H & 423H TO THE COTTON DRAW 14 CTB

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JUNE 8, 2016



SHEET: 3-4

SURVEY NO. 4753

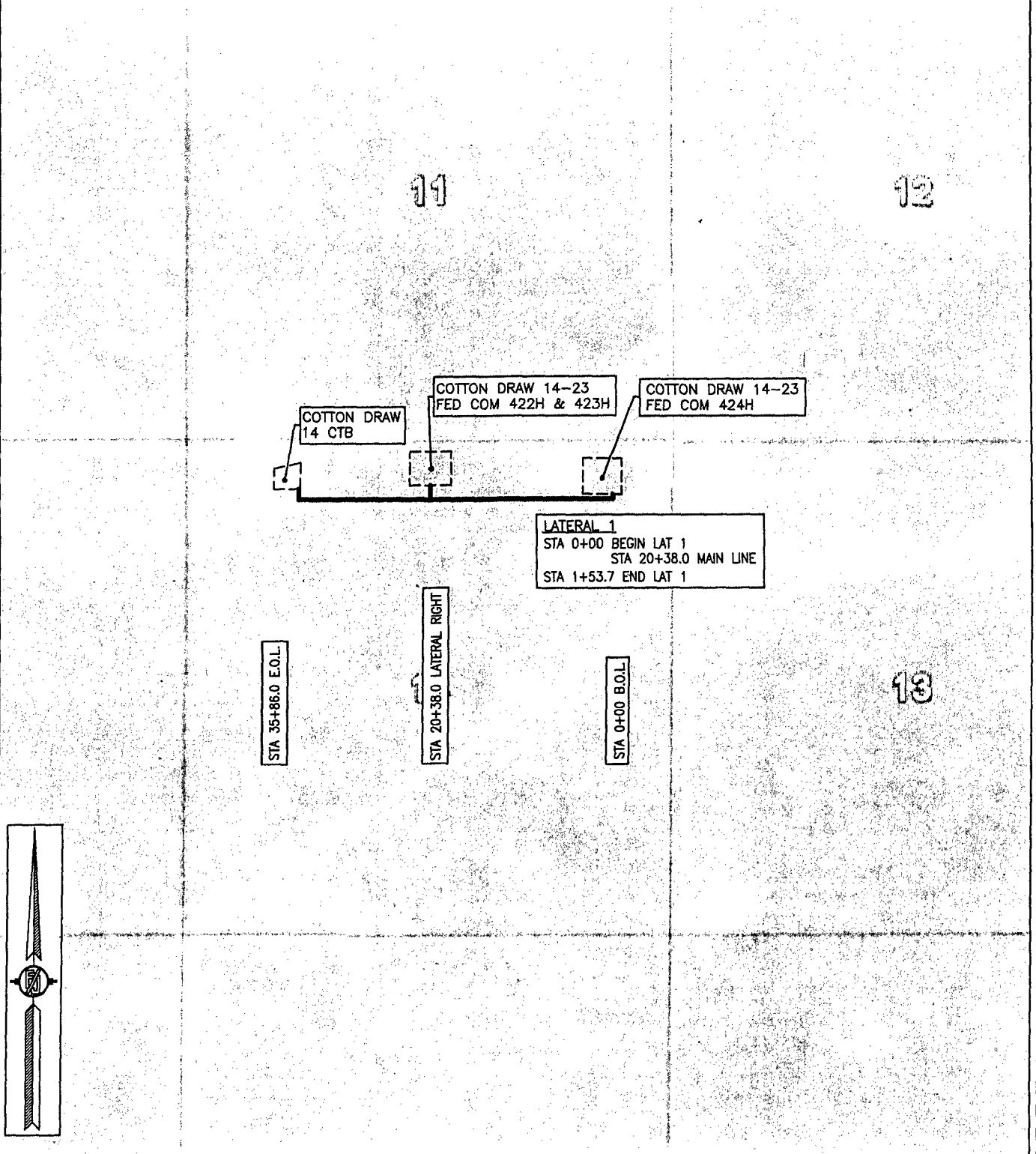
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

FLOWLINE PLAT (400681XYZ)

THREE 6" GAS LIFT LINES & THREE 6" FLOWLINES (BURIED IN SAME TRENCH) FROM THE COTTON DRAW 14-23 FED COM 424H & THE COTTON DRAW 14-23 FED COM 422H & 423H TO THE COTTON DRAW 14 CTB

DEVON ENERGY PRODUCTION COMPANY, L.P.

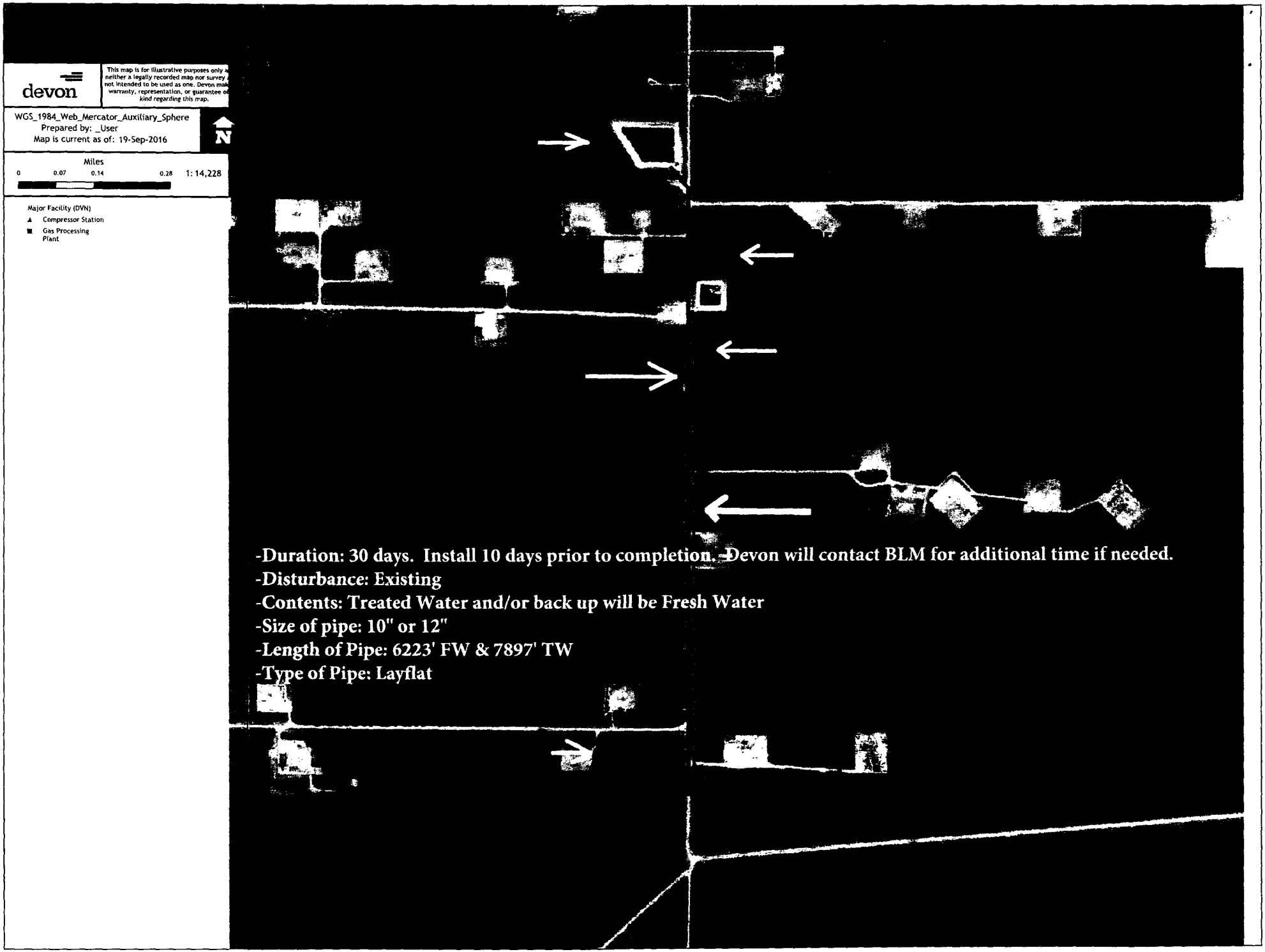
CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JUNE 8, 2016



SHEET: 4-4

SURVEY NO. 4753

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO


devon
This map is for illustrative purposes only
neither a legally recorded map nor survey
not intended to be used as one. Devon ma
warranty, representation, or guarantee o
kind regarding this map.
WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: _User
Map is current as of: 19-Sep-2016
N
Miles
0 0.07 0.14 0.28 1:14,228
Major Facility (DVN)
Compressor Station
Gas Processing Plant
-Duration: 30 days. Install 10 days prior to completion. Devon will contact BLM for additional time if needed.
-Disturbance: Existing
-Contents: Treated Water and/or back up will be Fresh Water
-Size of pipe: 10" or 12"
-Length of Pipe: 6223' FW & 7897' TW
-Type of Pipe: Layflat

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company, L.P.
LEASE NO.:	NMLC061862
WELL NAME & NO.:	424H-Cotton Draw 14 23 Fed Com
SURFACE HOLE FOOTAGE:	380'/N & 775'/E
BOTTOM HOLE FOOTAGE	2310'/N & 660'/E
LOCATION:	Section 14, T.25 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

Communitization Agreement

- 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.
- 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.
- 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.

I. 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)

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

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

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

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

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

II. CASING

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

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

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

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

Possibility of water flows in the Castile and Salado.
Possibility of lost circulation in Rustler, Delaware and Red Beds.

A. The **13-3/8** inch surface casing shall be set at approximately **760** feet (**in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt**) and cemented to the surface. **Additional cement maybe required.**

1. 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.

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

3. 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.

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

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

Intermediate casing must maintain 1/3 fluid filled during drilling operations

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Additional cement maybe required. Excess calculates to 17%.**

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

☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additional cement maybe required. Excess calculates to 24%.**

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.

III. PRESSURE CONTROL

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

B. 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).

C. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.**

   a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**

   b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**

   c. **Manufacturer representative shall install the test plug for the initial BOP test.**

   d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**

   e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

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

   1. 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).

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

3. 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.

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

5. 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.**

6. 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.

IV. DRILL STEM TEST

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

V. 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.

CLN 02072017

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company, L.P.
LEASE NO.:	NMLC061862
WELL NAME & NO.:	424H-Cotton Draw 14 23 Fed Com
SURFACE HOLE FOOTAGE:	380'/N & 775'/E
BOTTOM HOLE FOOTAGE	2310'/N & 660'/E
LOCATION:	Section 14, T.25 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

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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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
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  - Ground-level Abandoned Well Marker
  - Range
- ☐ **Construction**
  - Notification
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- ☐ **Road Section Diagram**
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
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  - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

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)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

The operator must contact the allotment holder prior to construction to identify the location of the pipeline. The operator must take measures to protect the pipeline from compression or other damages. If the pipeline is damaged or compromised in any way near the proposed project as a result of oil and gas activity, the operator is responsible for repairing the pipeline immediately. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

During construction, the proponent shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. The proponent 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 grazing permittee/allottee prior to disturbing any range improvement projects. 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.

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.

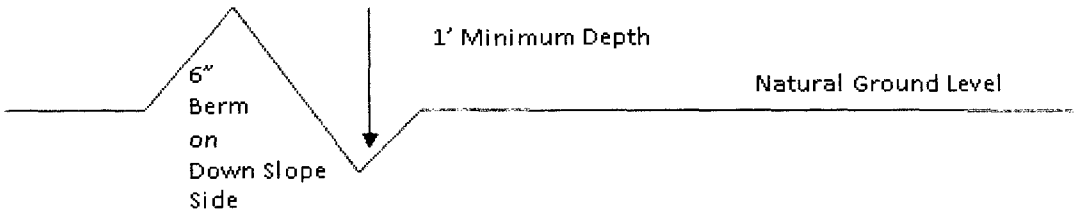
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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:

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

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards 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 cattle guards 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

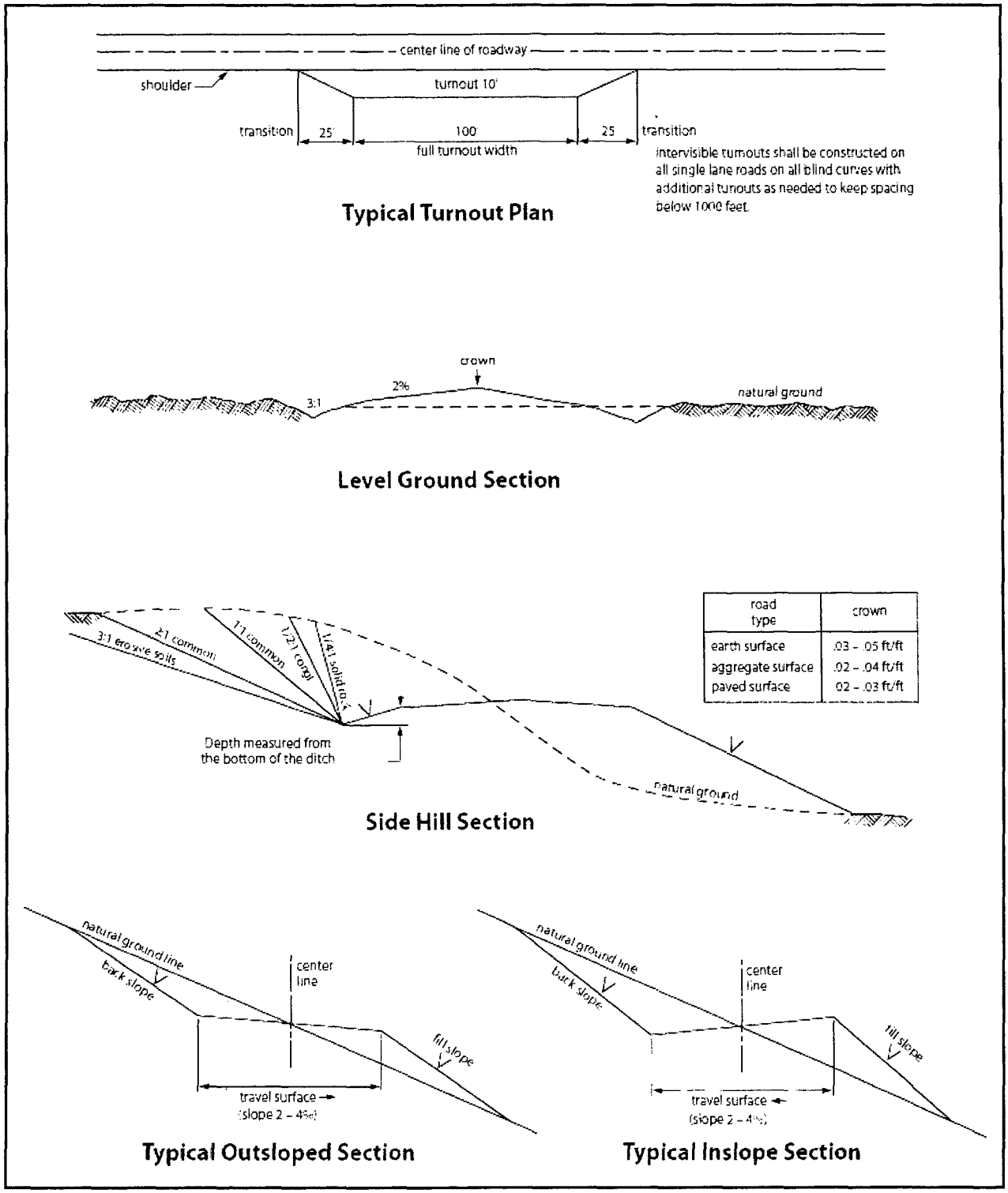


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. 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

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, 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. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil 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 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 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 the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. 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.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

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. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

( ) seed mixture 1	( ) seed mixture 3
( ) seed mixture 2	( ) seed mixture 4
(X) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. 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. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. 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 before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (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.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

Lesser Prairie-Chicken

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except

between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

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.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

C.

VIII. 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).

IX. 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).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery Sites

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 shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall 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). 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. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may 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
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

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