15-789

OCD Artesia

*Amended 4/10/2015

Form 3160-3
(February 2005)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
~~NM-37294~~ NM119271

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.
Harroun Ranch Fed Com, 20702 31H

2. Name of Operator
BTA Oil Producers, LLC

9. API Well No.
30- 015-43438

3a. Address 104 S. Pecos
Midland, TX 79701

3b. Phone No. *(include area code)*
(432) 682-3753

10. Field and Pool, or Exploratory
Laguna Salado; Bone Spring

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 170' FSL & 2465' FWL Sec. 20 UL -N-
At proposed prod. zone 210' FNL & 1900' FWL Sec. 20 UL -C- UNORTHODOX LOCATION

11. Sec., T. R. M. or Blk. and Survey or Area
Sec. 20, T23S-R29E

14. Distance in miles and direction from nearest town or post office*
5 miles East from Loving, NM

12. County or Parish
Eddy

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 170'

16. No. of acres in lease
640

17. Spacing Unit dedicated to this well
160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. BHL: 487'

19. Proposed Depth
13431' MD 8500' TVD

20. BLM/BIA Bond No. on file
NM1195 NMB000849

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
2987' GL*

22. Approximate date work will start*
10/01/2015

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 Kayla McConnell
Name *(Printed Typed)* Kayla McConnell
Date 06/11/2015

Title Regulatory Analyst
Email: (kmcconnell@btaoil.com)

Approved by *(Signature)* Steve Caffey
Name *(Printed Typed)*
Date OCT 22 2015

Title FIELD MANAGER
Office CARLSBAD FIELD OFFICE

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

~~APPROVAL FOR TWO YEARS~~

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

*(Instructions on page 2)

Must be in compliance with NMOCD Rule 5.9 prior to transporting/selling product.

SRD 10/29/2015

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 27 2015

Carlsbad Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

RECEIVED

Approval Subject to General Requirements & Special Stipulations Attached

COPY

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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30- 015- 43438	96721	LAGUNA SALADO;BONE SPRING

Property Code	Property Name	Well Number
~~37294~~ 315261	(~~20702~~) HARROUN RANCH FEDERAL COM 20702	3H

OGRID No.	Operator Name	Elevation
260297	BTA OIL PRODUCERS	2987'

Surface Location

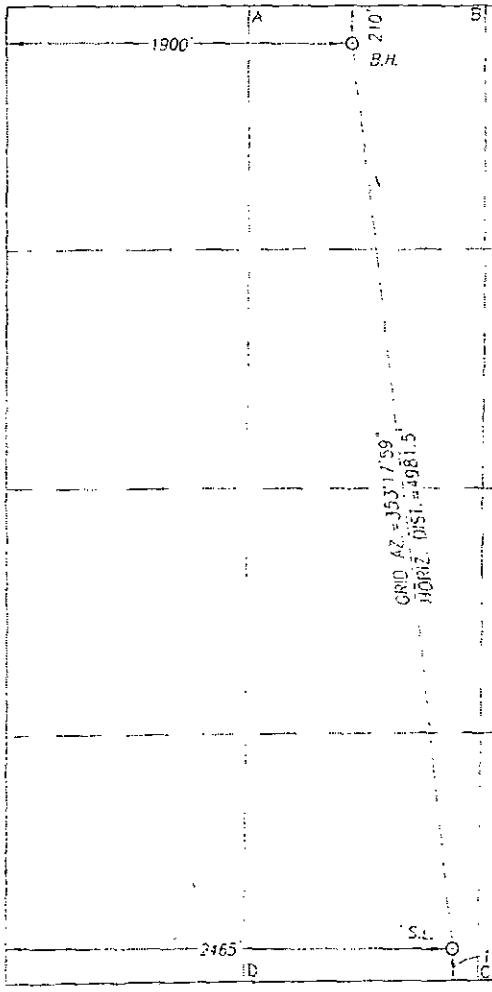
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	20	23-S	29-E		170	SOUTH	2465	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	20	23-S	29-E		210	NORTH	1900	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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



GEODETIC COORDINATES
NAD 27 NME
BOTTOM HOLE LOCATION
Y= 471968.3 N
X= 600249.2 E
LAT.=32.297141° N
LONG.=104.008893° W

CORNER COORDINATES TABLE
NAD 27 NME
A - Y= 472176.3 N, X= 599672.6 E
B - Y= 472180.9 N, X= 600996.0 E
C - Y= 466853.3 N, X= 600973.0 E
D - Y= 466841.9 N, X= 599669.7 E

GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 467022.1 N
X= 600830.2 E
LAT.=32.283539° N
LONG.=104.007062° W

OPERATOR CERTIFICATION

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

Kayla McConnell 6/5/2015
Signature Date

Kayla McConnell
Printed Name

kmcconnell@btaoil.com
E-mail Address

SURVEYOR CERTIFICATION

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

MARCH 13, 2013
Date of Survey
Signature & Seal of Professional Surveyor

Ronald J. Eidson 03/26/2015
Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

LSL WSC W.O. 15.11.0224

COPY

MULTI-POINT SURFACE USE & OPERATIONS PLAN

BTA OIL PRODUCERS, LLC

#3H, Harroun Ranch Federal Com, 20702
170' FSL & 2465' FWL
Sec. 20, T23S, R29E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the referenced well. The plan describes the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance, and the procedures to be followed in rehabilitating the surface after completion of the operation so that complete appraisal can be made concerning the environmental effects associated with the operations.

1. Existing Roads

   A. The well was staked by John West Surveying Company.
   B. Exhibit -B- is a topographic map showing the location of the proposed well as staked with existing roads and conditions within the one mile area. The proposed location is approximately 5.5 miles east from Loving, New Mexico as shown on Exhibit -C-.
   C. From Loving NM go northwest on U.S. Hwy 285 approximately 2.3 miles, turn right on State Hwy 31 and go east 3.0 miles, then northeast 2 miles to Co. Road 741, turn right on Co. Road 741 and go approximately 1.1 miles to end of route, turn left and go southeast approximately 2.1 miles to a stakes road, follow road south approximately 0.1 mile; turn left and go southeast approximately .5 miles to the proposed well location as shown on Exhibits -B- and -D-.

2. Access Roads

   A. Our proposed new access road will be 3108' northeast from the well pad to the existing lease road as shown on Exhibit -B-, -D- and -E-.
   B. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion. The road will be maintained during drilling operations and, if productive, as long as producing.
   C. Native caliche will be used for the access road and drill pad, compacted and watered. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be 1°.
   D. No cattle guards, grates, or fence cuts will be required. No turnouts are planned.
   E. We are, with this application, applying for the new access ROW from Eddy Co Rd 741 extending to this location for BLM surface.

3. Location of Existing Wells

A. All existing wells within 1 mile radius of our proposed well (SL and BHL) are shown on Exhibit -F-.

4. Location of Existing and/ or Proposed Facilities if Well is Productive.

A. If well is productive, a production facility is proposed to be installed off the proposed well location and permitted with the 20702 Harroun ranch Fed Com #4H. If any plans change regarding the production facility or other infrastructure we will submit sundry notice or right of way prior to installation or construction.
B. If necessary, the well will be operated by means of an electric prime mover. Electric power poles and lines will be set along side of the access road to tie in with an existing Xcel Energy line. We are, with this application applying for new electric ROW from Eddy Co Rd 741 extending to this location for BLM surface as depicted on Exhibit -G-, -H-, and -I-.
C. A surface flow line of approximately 2938' (2493' BLM surface, 445' Fee surface) of 2-7/8" steel pipe carrying gas under a maximum pressure of 125 psi will follow the access road to an existing gas flowline that transects Section 20. The flowline will be placed a safe distance, estimated 5-10', from the road.
D. The tank battery and facilities, including all flow lines will adhere to API standards.
E. Additional facilities, if necessary for operations, will be applied for via Sundry notice with a schematic diagram prior to installation.
F. Should the well be successfully completed for production, the original topsoil from the site will be returned to the location. The drill site will be contoured as close as possible to the original state.
G. All facilities will be painted a flat, nonreflective, earthtone color to match the standard environmental colors within six months of installation.

5. Location and Type of Water Supply

A. Water for drilling and completion operations will either be purchased from commercial water stations in the area and trucked to the well site using the existing and proposed roads or transported from a pre-existing water well by plastic temporary "fas-line" laid on the surface alongside existing roads.

6. Source of Construction Materials

A. Caliche used for construction of the drilling pad and access road will be obtained from the closest existing caliche pit as designated by the BLM or from prevailing deposits found under the location.
B. If there is not sufficient material available, it will be purchased from the area designated by the BLM.

7. Methods of Handling Waste Disposal

A. This will be a closed loop system.

B. Water produced during operations will be collected in tanks until hauled to an approved disposal system or a separate disposal application will be submitted to the BLM for appropriate approval.
C. Oil and condensate produced during testing will be stored in test tanks until sold.
D. Grey water and sewage will be contained safely and disposed of properly at a state-approved facility.
E. The supplier will pick up salts remaining after completion of well, including broken sacks.
F. Trash, waste paper and garbage will be disposed of by hauling to an approved and available disposal. All waste material will be contained in a totally enclosed trash basket with a fine wire mesh, to prevent wind scattering during collection. The road and pad will be kept litter free.

8. Ancillary Facilities

A. It is possible that a mobile home will be used at the well site during drilling operations.
B. A Frac Pond will be constructed in the SW/SW of Section 20, as depicted on the Exhibit -J-.

9. Wellsite Layout

A. Exhibit -K- shows the proposed pad layout.
B. No major cut and fill will be required at the well site; however, it will require clearing and leveling.
C. Mud pits in the active circulating system will be steel pits.

10. Plans for Restoration of Surface

A. Following drilling and/or completion operations, all equipment and material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site as clean as possible.
B. The unused pad area will be contoured to the natural terrain. Topsoil will be evenly distributed over the entire location.
C. Upon cessation of production, all rehabilitation and/or vegetation requirements of the BLM will be complied with and will be accomplished as expeditiously as possible.
D. Upon cessation of production, all disturbed areas will be seeded on the contour at a depth of one-half inch using the following mixture:
   1 pound per acre Alkali Sacaton (Sporobolus airoides)
   5 pound per acre Four-wing Saltbush (Atriplex canescens)
E. Seeding will be completed after September 15th and prior to November 15th before freeze up or as early as possible the following spring to take advantage of available ground moisture.
F. Newly constructed access road will be recontoured, disked, and seeded as specified above. All rehabilitation work, including seeding, will be completed as specified by the BLM, or sooner if conditions permit.

11. Surface Topography

A. The surface ownership is: USA – BLM
620 E. Greene Street
Carlsbad, NM 88220

Grazing Lease: Henry McDonald or Draper Bentley
P. O. Box 597
Loving, NM 88256

B. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.
C. The surface owner and grazing lessee have been contacted and notified of the staking of our well and our plans for drilling
D. The wellsite and access route are located to the south of Harroun Ranch. The area is fairly flat with sandy loam soil underlain with caliche.
E. The Pecos River is approximately 1-1/2 miles west/southwest of the general proximity of the location. There is also the Harroun Canal, which runs along the path of the river.
F. There are no houses or building within one mile of the drill site.
F. Signs identifying and locating our well will be maintained at the drill site and principle entrance, commencing with the spudding of the well.
G. BTA has entered into a PB PA (MOA) agreement with the BLM for the cultural resources examination for this project.

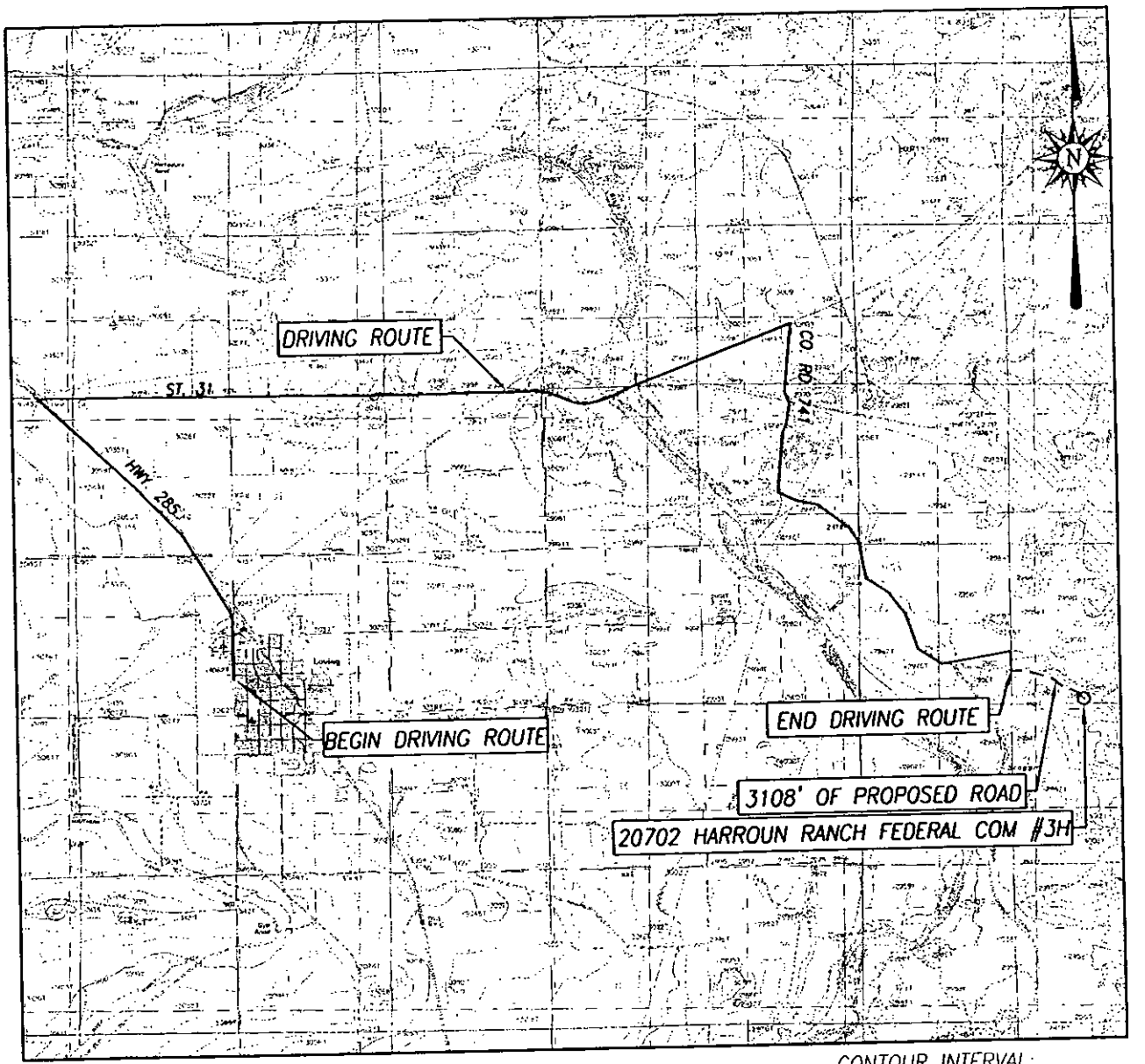
12. Bond Coverage: NM1195

13. Operator's Representative:

A. The field representative that is responsible for assuring compliance with the approved surface use plan is:

Drilling Manager: Mr. Nick Eaton
Phone: 432-682-3753 (Office)
432-260-7841 (Mobile)

TOPOGRAPHICAL AND ACCESS ROAD MAP



SCALE: 1" = 5280'

CONTOUR INTERVAL:
LOVING, N.M. - 10'

SEC. 20 TWP. 23-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 170' FSL & 2465' FWL

ELEVATION 2986.7'

OPERATOR BTA OIL PRODUCERS

LEASE 20702 HARROUN RANCH FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP
LOVING, N.M.

DIRECTIONS TO 20702 HARROUN RANCH FEDERAL COM #3H:

FROM LOVING N.M. GO NORTHWEST ON U.S. HWY. 285 APPROX. 2.3 MILES, TURN RIGHT ON ST. HWY. 31 AND GO EAST 3.0 MILES, THEN NORTHEAST 2 MILES TO CO. RD. 741, TURN RIGHT ON CO. RD. 741 AND GO APPROX. 1.1 MILES TO END OF ROUTE, TURN LEFT AND GO SOUTHEAST APPROX. 2.1 MILES TO A STAKED ROAD, FOLLOW ROAD SOUTH APPROX. 0.1 MILE; TURN LEFT AND GO SOUTHEAST APPROX. 0.5 MILES TO THE NORTHWEST CORNER OF THIS WELL PAD. THIS LOCATION IS APPROX. 207 FEET SOUTHEAST.

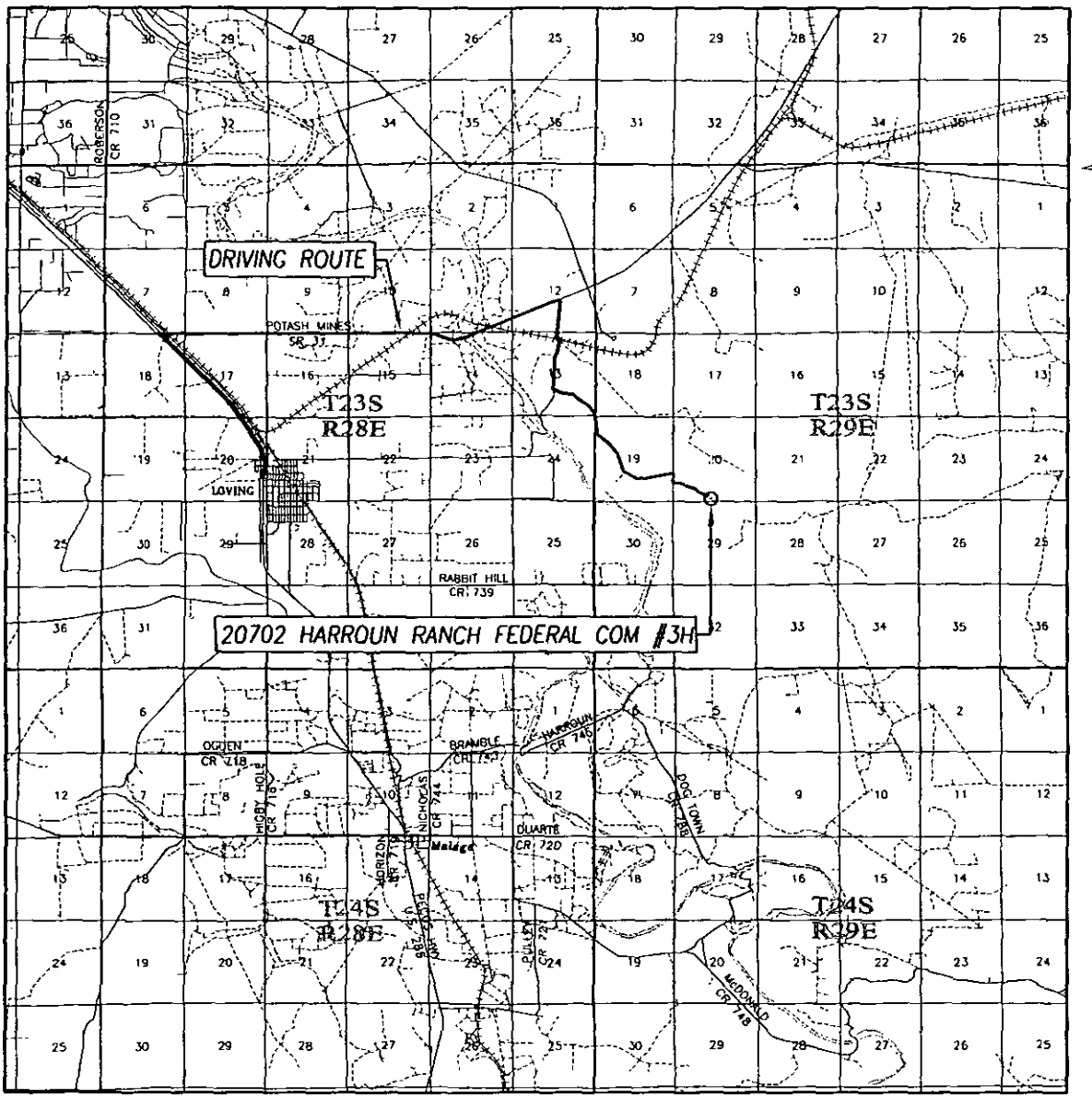
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS#

COPY

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -B-
Sec 20, T23S, R29E
Eddy County, NM

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -C-
Sec 20, T23S, R29E
Eddy County, NM

VICINITY MAP



SCALE: 1" = 2 MILES

DRIVING ROUTE: SEE TOPOGRAPHICAL AND ACCESS ROAD MAP

SEC. 20 *TWP.* 23-S *RGE.* 29-E

SURVEY N.M.P.M.

COUNTY EDDY *STATE* NEW MEXICO

DESCRIPTION 170' FSL & 2465' FWL

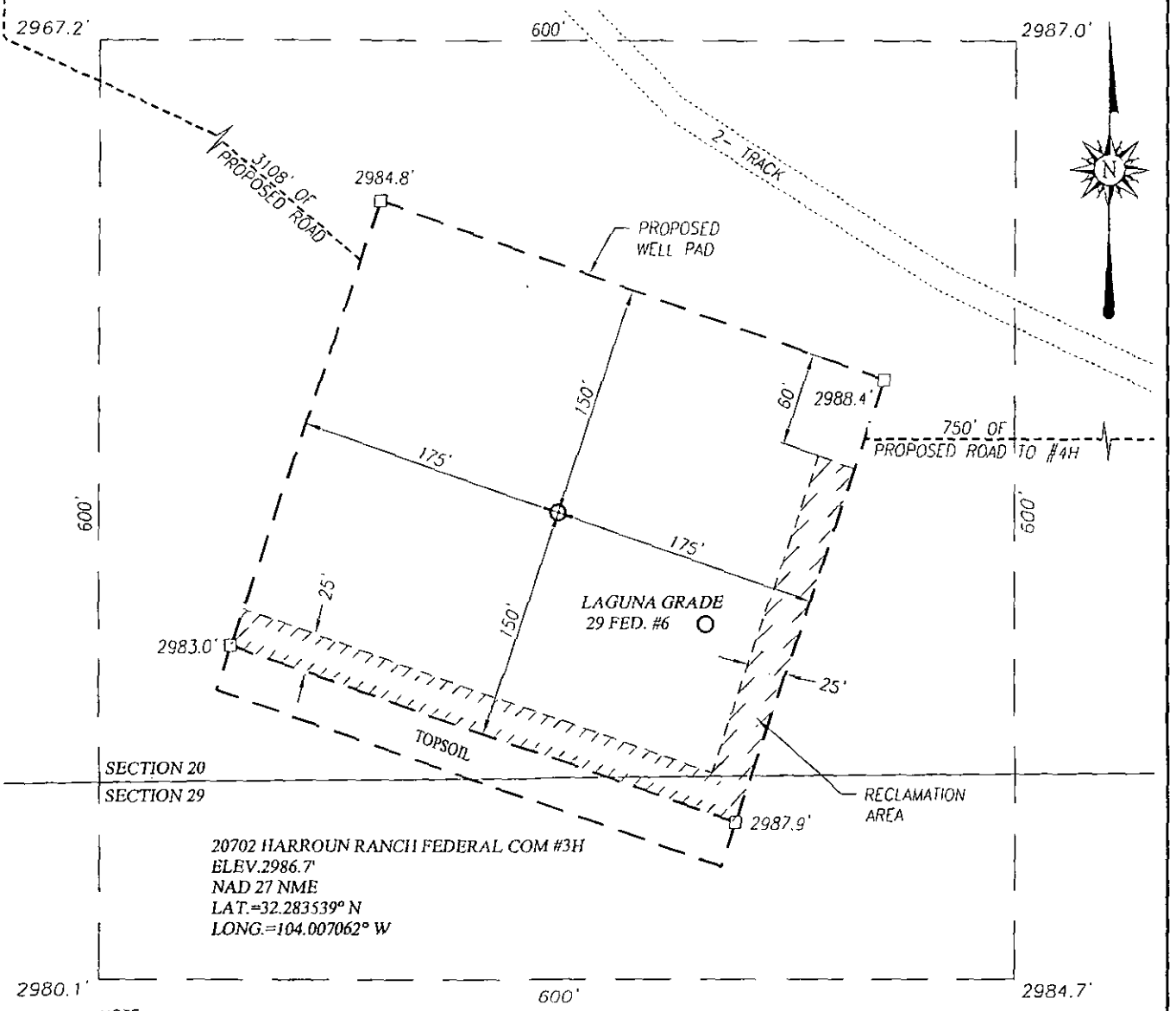
ELEVATION 2987'

OPERATOR BTA OIL PRODUCERS

LEASE 20702 HARROUN RANCH FEDERAL COM

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

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -D-
Sec 20, T23S, R29E
Eddy County, NM



NOTE:
1) SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO 20702 HARROUN RANCH FEDERAL COM #3H:

FROM LOVING N.M. GO NORTHWEST ON U.S. HWY. 285 APPROX. 2.3 MILES, TURN RIGHT ON ST. HWY. 31 AND GO EAST 3.0 MILES, THEN NORTHEAST 2 MILES TO CO. RD. 741, TURN RIGHT ON CO. RD. 741 AND GO APPROX. 1.1 MILES TO END OF ROUTE, TURN LEFT AND GO SOUTHEAST APPROX. 2.1 MILES TO A STAKED ROAD, FOLLOW ROAD SOUTH APPROX. 0.1 MILE; TURN LEFT AND GO SOUTHEAST APPROX. 0.5 MILES TO THE NORTHWEST CORNER OF THIS WELL PAD. THIS LOCATION IS APPROX. 207 FEET SOUTHEAST.

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

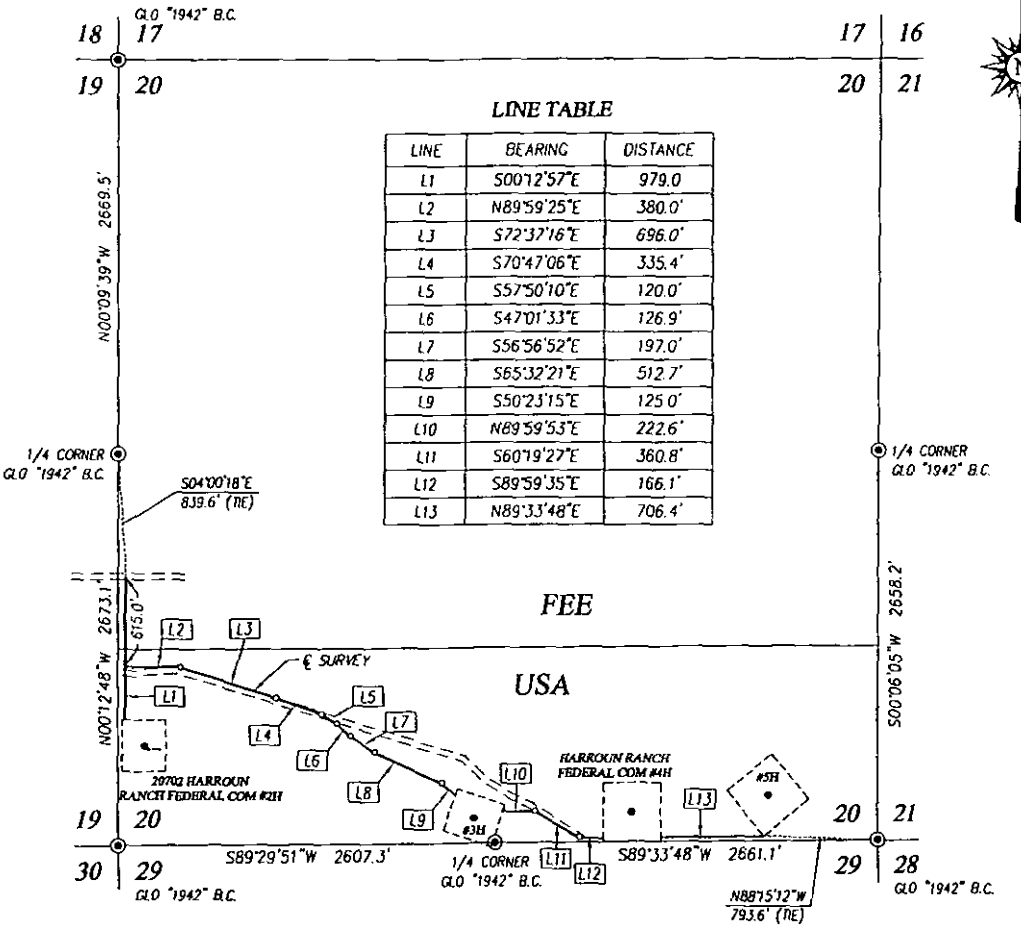
BTA OIL PRODUCERS

20702 HARROUN RANCH FEDERAL COM #3H WELL LOCATED 170 FEET FROM THE SOUTH LINE AND 2465 FEET FROM THE WEST LINE OF SECTION 20, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

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

Survey Date: 3/13/15	CAD Date: 3/25/15	Drawn By: LSL	
W.O. No.: 15110224	Rev: 6/4/15	Rel. W.O.:	Sheet 1 of 1

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -E-
Sec 20, T23S, R29E
Eddy County, NM



LINE TABLE

LINE	BEARING	DISTANCE
L1	S00°12'57"E	979.0'
L2	N89°59'25"E	380.0'
L3	S72°37'16"E	696.0'
L4	S70°47'06"E	335.4'
L5	S57°50'10"E	120.0'
L6	S47°01'33"E	126.9'
L7	S56°56'52"E	197.0'
L8	S65°32'21"E	512.7'
L9	S50°23'15"E	125.0'
L10	N89°59'53"E	222.6'
L11	S60°19'27"E	360.8'
L12	S89°59'35"E	166.1'
L13	N89°33'48"E	706.4'

DESCRIPTION

SURVEY FOR STRIPS OF LAND 50.0 FEET WIDE AND 4927.9 FEET OR 0.933 MILES IN LENGTH CROSSING USA LAND IN SECTION 20, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

NOTE

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

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J. Eidson

DATE: 06/05/2015

LEGEND

◉ DENOTES FOUND CORNER AS NOTED

1000 0 1000 2000 FEET

Scale: 1"=1000'

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

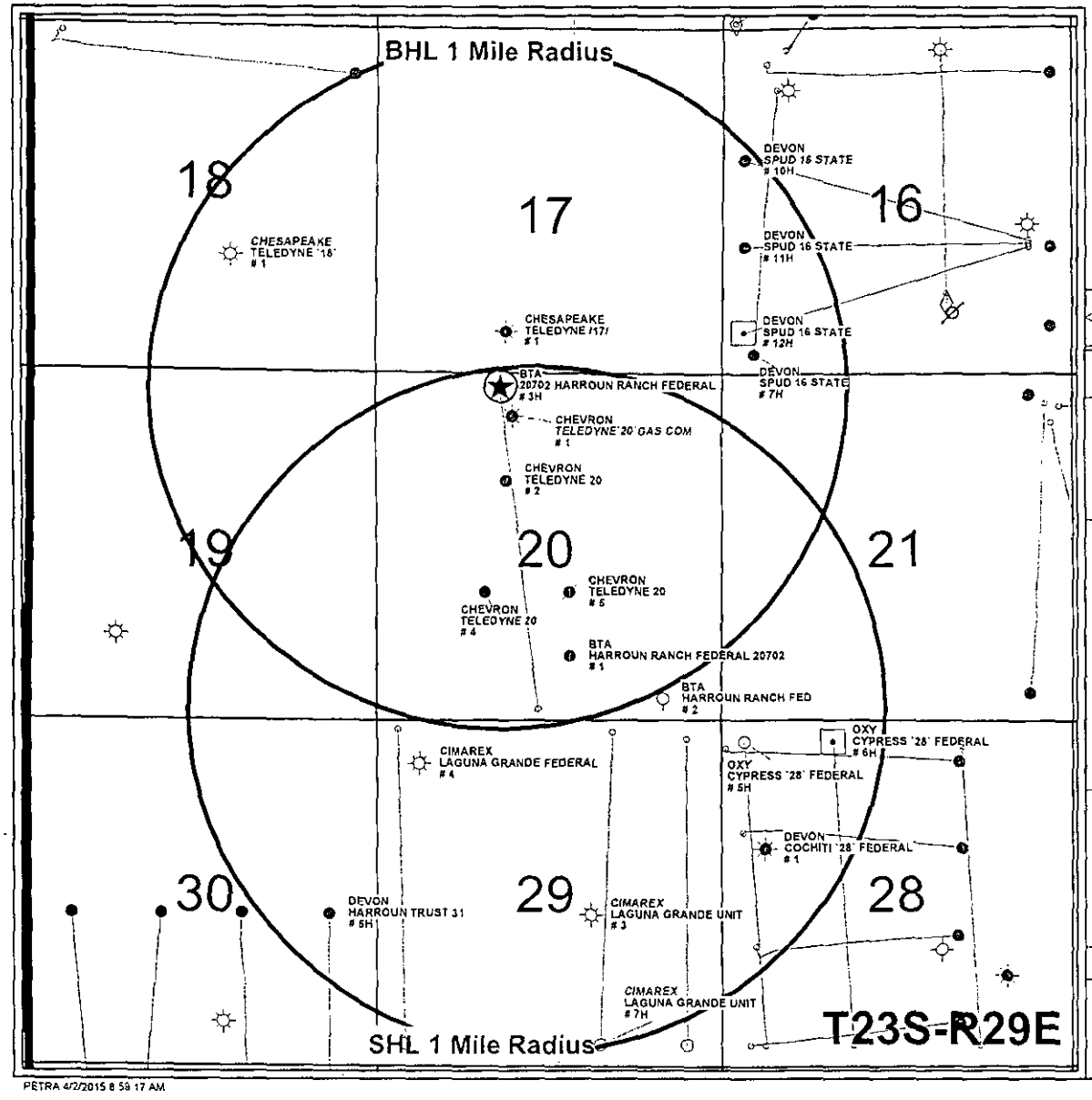
© DRAFTING

BTA OIL PRODUCERS

SURVEY FOR A PROPOSED ROAD TO THE 20702 HARROUN RANCH FEDERAL COM #2H, #3H, #4H, #5H, CROSSING SECTION 20, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

Survey Date: 3/13/15	CAD Date: 3/26/15	Drawn By: LSL
W.O. No.: 15110378	Rev: 6/4/15	Rel. W.O.:	Sheet 1 of 1

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -F-
Sec 20, T23S, R29E
Eddy County, NM



PETRA 4/2/2015 8:59:17 AM

BTA OIL PRODUCERS, LLC

20702 Harroun Ranch Fed Com #3H

1 Mile Radius Map

SL:170'FSL&2465'FWL,BL:210'FNL&1900'FWL

Sec.20,T23S, R29E, Eddy Co., NM

WELL SYMBOLS
- Proposed Location
- Location Only
- Drilled, Waiting on Completion
- Oil Well
- Gas Well
- Oil & Gas Well
- *Dry Hole*
- Plugged & Abandoned Oil Well
- *Injection From Oil*
- Oil & Gas Well
- *Temporarily Abandoned*

REMARKS

20702 Harroun Ranch Fed Com #3H
Highlighted in Yellow

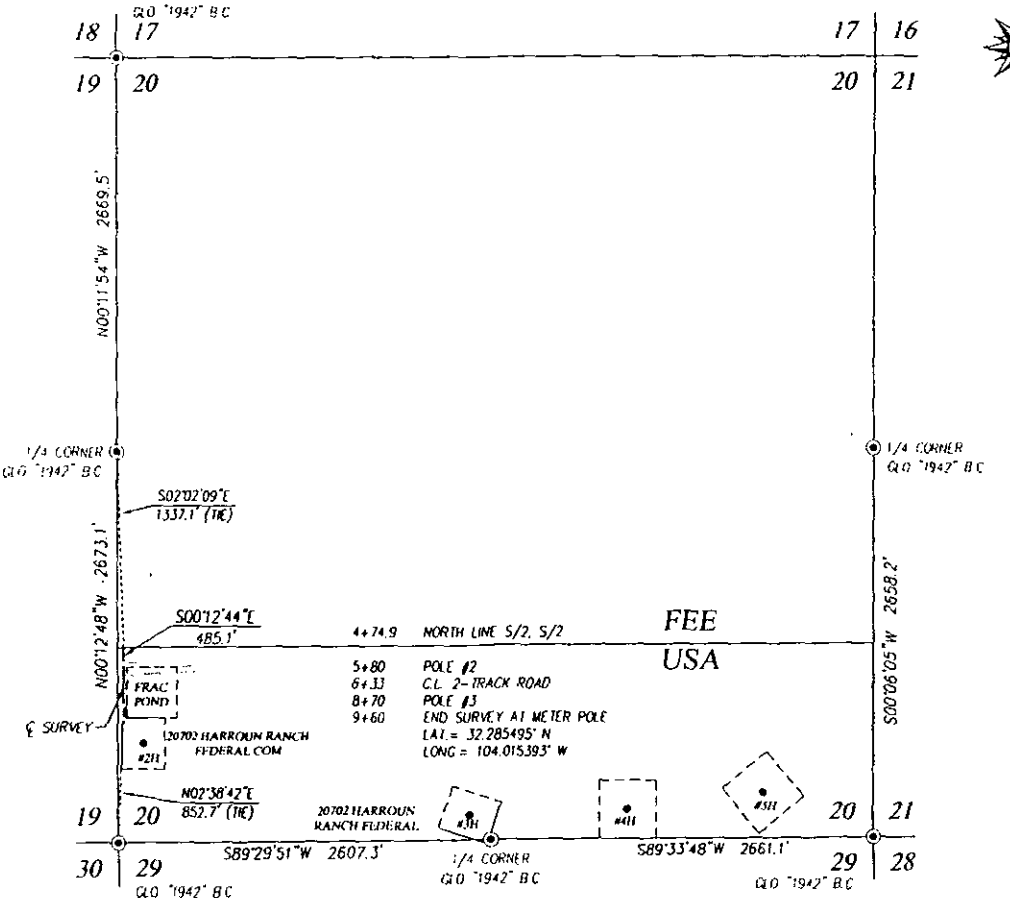
Only Wells Inside1 Mile Radius Labeled

By: JHB

0 2,500 5,000
FEET

APD

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -G-
Sec 20, T23S, R29E
Eddy County, NM



DESCRIPTION

SURVEY FOR A STRIP OF LAND 50.0 FEET WIDE AND 485.1 FEET OR 0.092 MILES IN LENGTH CROSSING USA LAND IN SECTION 20, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

NOTE

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

2) LATITUDE AND LONGITUDE VALUES SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN DATUM 1983 (NAD83).

LEGEND

◉ DENOTES FOUND CORNER AS NOTED

1000 0 1000 2000 FEET

Scale: 1"=1000'

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J. Eidson

DATE: 04/06/2015

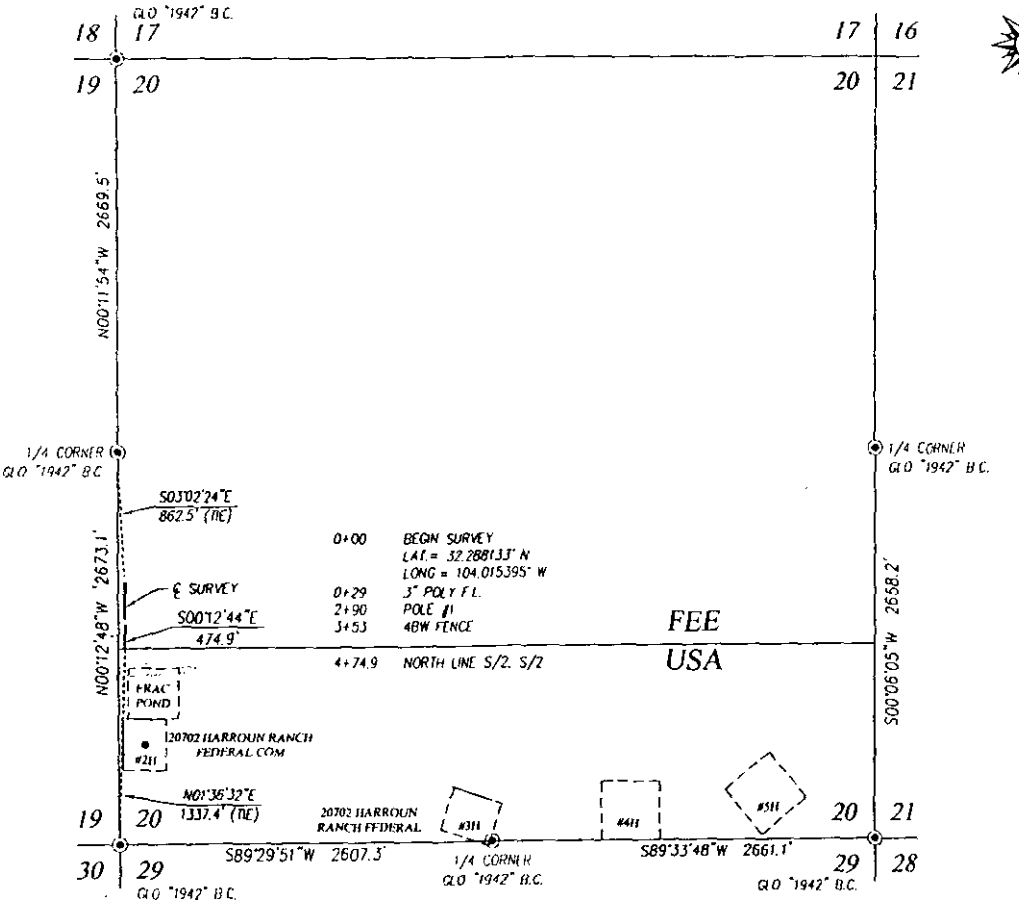
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

BTA OIL PRODUCERS

SURVEY FOR AN ELECTRIC LINE TO THE
20702 HARROUN RANCH FEDERAL COM #2H
CROSSING SECTION 20,
TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Survey Date: 3/13/15	CAD Date: 4/2/15	Drawn By: LSL
W.O. No.: 15110376	Rev: .	Rel. W.O.:	Sheet 1 of 1

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -H-
Sec 20, T23S, R29E
Eddy County, NM



DESCRIPTION

SURVEY FOR AN ELECTRIC LINE CROSSING SECTION 20, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTHWEST QUARTER, WHICH LIES S03°02'24"E 862.5 FEET FROM THE WEST QUARTER CORNER; THEN S00°12'44"E 474.9 FEET TO A POINT IN THE NORTH LINE OF THE S/2 OF THE S/2, WHICH LIES N01°36'32"E 1337.4 FEET FROM THE SOUTHWEST CORNER.

TOTAL LENGTH EQUALS 474.9 FEET OR 28.78 RODS.

NOTE

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

2) LATITUDE AND LONGITUDE VALUES SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN DATUM 1983 (NAD83)

LEGEND

◉ DENOTES FOUND CORNER AS NOTED

1000 0 1000 2000 FEET

Scale: 1"=1000'

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED, WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J. Eidson

DATE: 04/06/2015

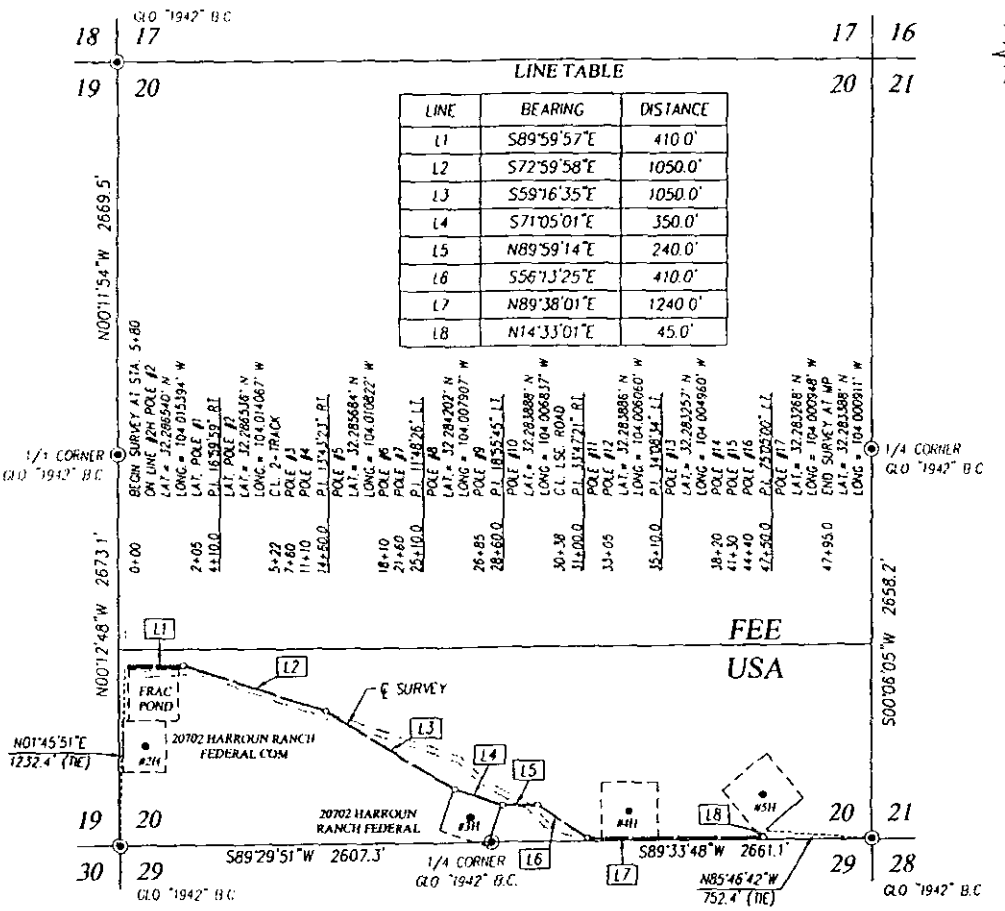
PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

BTA OIL PRODUCERS

SURVEY FOR AN ELECTRIC LINE TO THE
20702 HARROUN RANCH FEDERAL COM #2H
CROSSING SECTION 20,
TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Survey Date: 3/13/15	CAD Date: 4/2/15	Drawn By: LSL
W.O. No.: 15110376	Rev.	Rel. W.O.:	Sheet 1 of 1

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -I-
Sec 20, T23S, R29E
Eddy County, NM



LINE TABLE

LINE	BEARING	DISTANCE
L1	S89°59'57"E	410.0'
L2	S72°59'58"E	1050.0'
L3	S59°16'35"E	1050.0'
L4	S71°05'01"E	350.0'
L5	N89°59'14"E	240.0'
L6	S56°13'25"E	410.0'
L7	N89°38'01"E	1240.0'
L8	N14°33'01"E	45.0'

DESCRIPTION

SURVEY FOR A STRIP OF LAND 50.0 FEET WIDE AND 4795.0 FEET OR 0.908 MILES IN LENGTH CROSSING USA LAND IN SECTION 20, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

NOTE

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

2) LATITUDE AND LONGITUDE VALUES SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN DATUM 1983 (NAD83).

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J Eidson

DATE: 04/06/2015

LEGEND

◉ DENOTES FOUND CORNER AS NOTED

1000 0 1000 2000 FEET

Scale: 1"=1000'

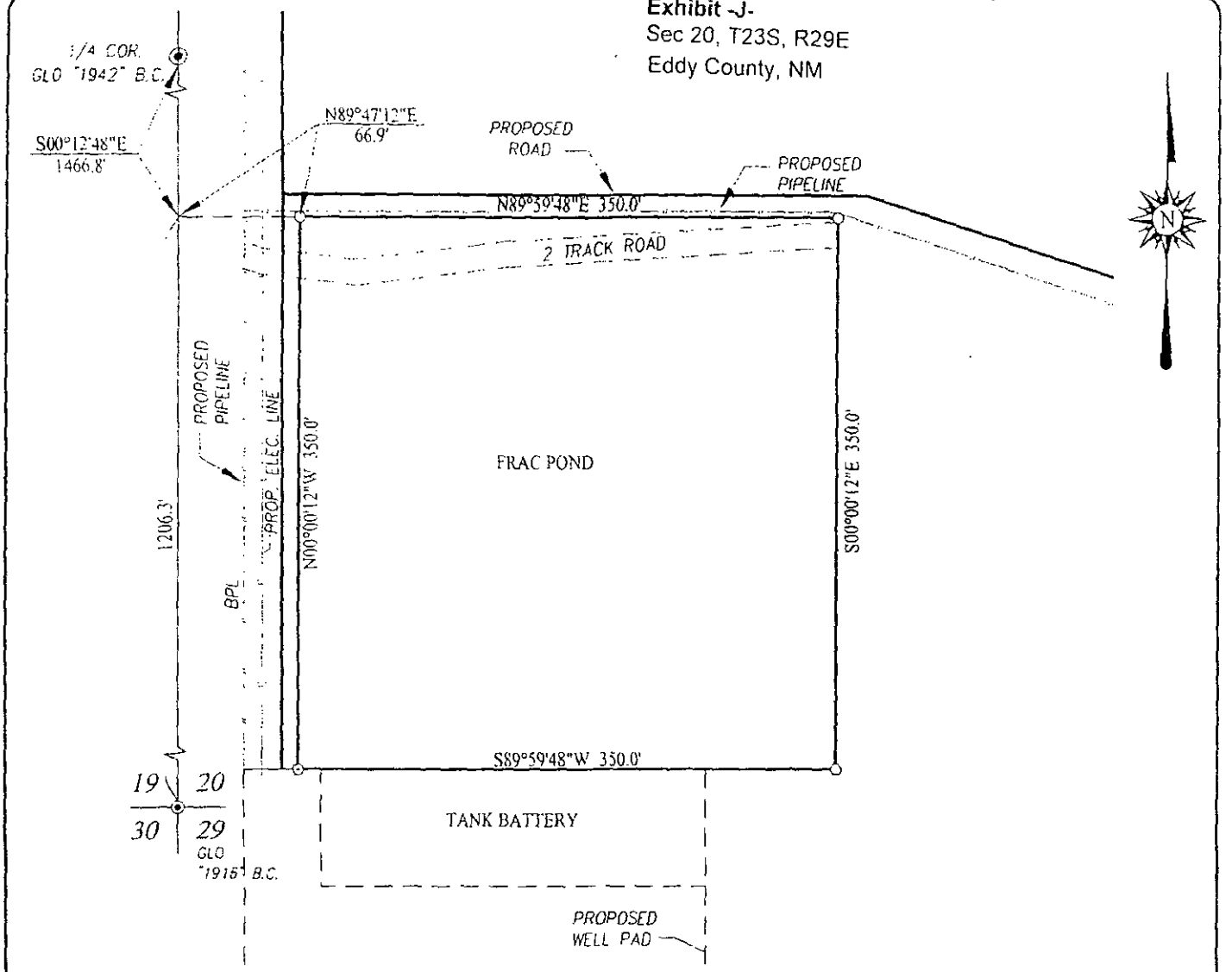
PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

BTA OIL PRODUCERS

SURVEY FOR AN ELECTRIC LINE TO THE 20702 HARROUN RANCH FEDERAL #3H, #4H, & #5H CROSSING SECTION 20, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

Survey Date: 3/18/15	CAD Date: 4/2/15	Drawn By: LSL
W.O. No.: 15110376	Rev. .	Ref. W.O.:	Sheet 1 of 1

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -J-
Sec 20, T23S, R29E
Eddy County, NM



LEGEND

- ◉ DENOTES FOUND CORNER AS NOTED
- ○ DENOTES SET SPIKE NAIL

NOTE

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

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY, PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J. Eidson

DATE: 04/01/2015

DESCRIPTION:

A track for a FRAC POND SITUATED IN THE SOUTHWEST QUARTER OF SECTION 20, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER, WHICH LIES S00°12'48"E 1466.8 FEET AND N89°47'12"E 66.9 FEET FROM THE WEST 1/4 CORNER; THEN N89°59'48"E 350.0 FEET; THEN S00°00'12"W 350.0 FEET; THEN S89°59'48"W 350.0 FEET; THEN N00°00'12"W 350.0 FEET TO THE POINT OF BEGINNING AND CONTAINING 2.812 ACRES MORE OR LESS.

100 0 100 200 Feet

Scale: 1"=100'

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

BTA OIL PRODUCERS, LLC

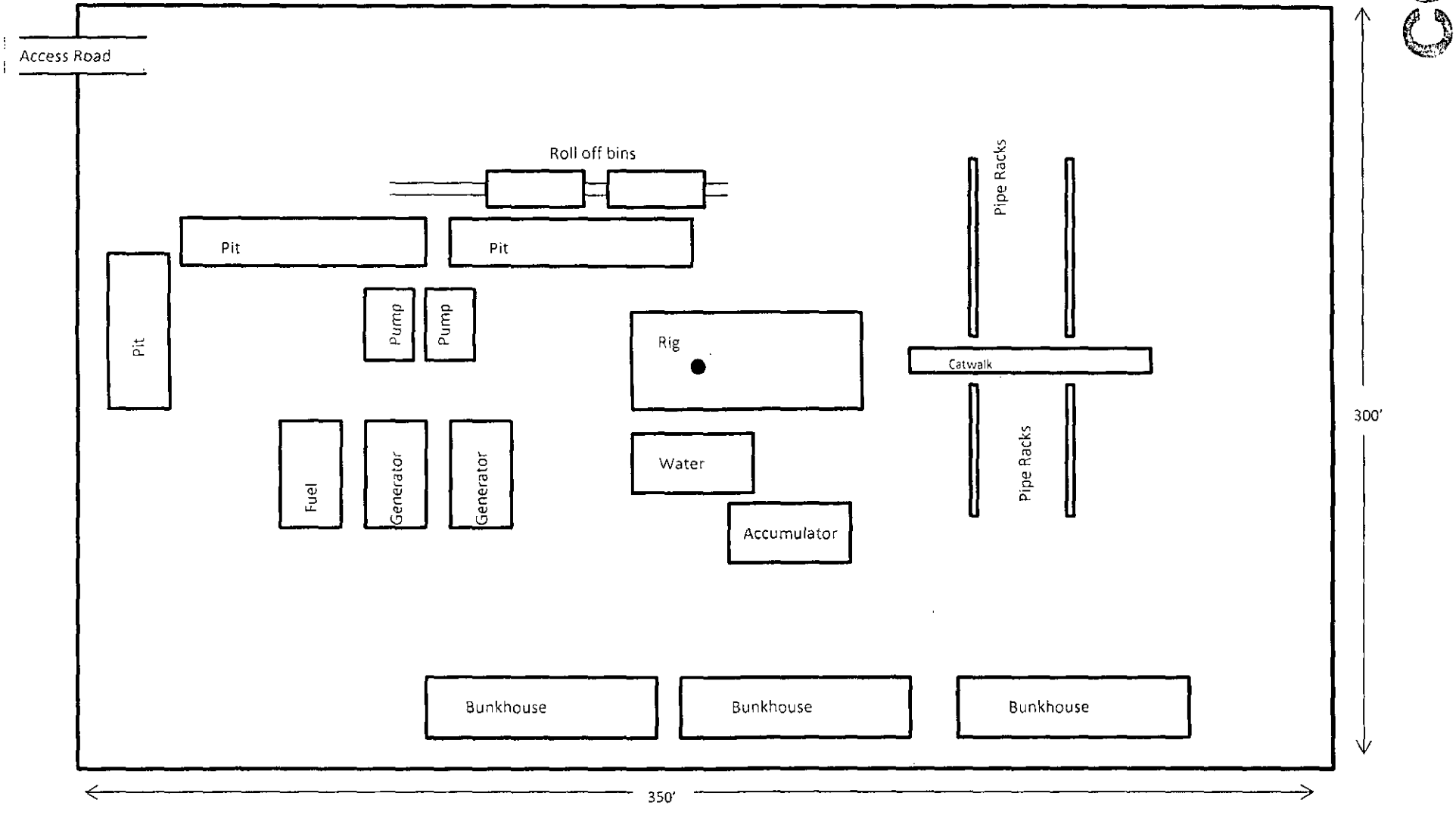
SURVEY FOR A FRAC POND
SITUATED IN THE SW/4 OF SECTION 20,
TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, NEW MEXICO

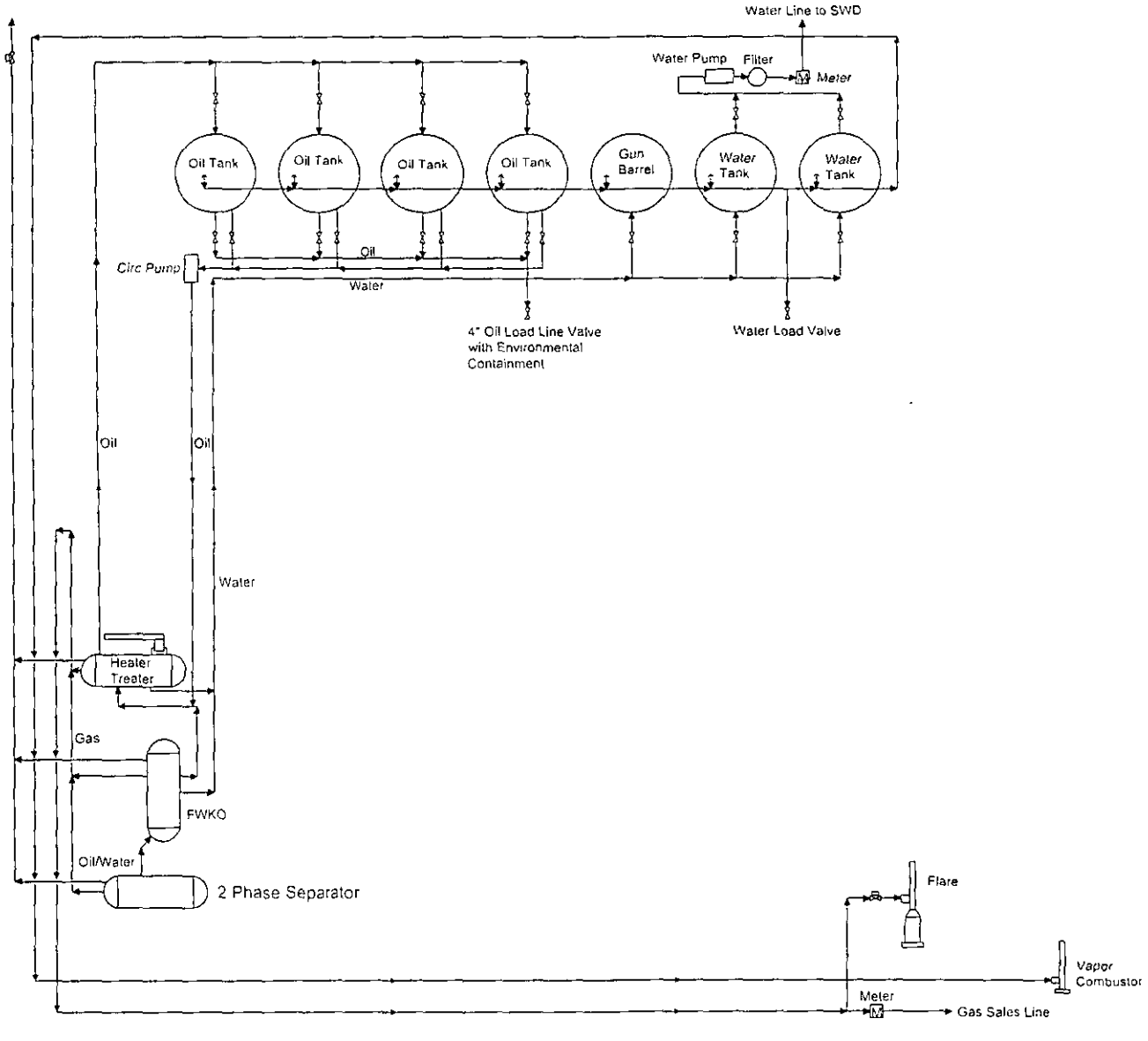
Survey Date: 3/13/15	CAD Date: 4/1/15	Drawn By: LSL
W.O. No.: 15110375	Rev:	Rel. W.O.:	Sheet 1 of 1

BTA Oil Producers
20702 Harroun Ranch Fed Com #3H
170' FSL 2465' FWL
Sec 20, 23S, 29E
Eddy County, NM

BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Exhibit -K-
Sec 20, T23S, R29E
Eddy County, NM

COPY





NOT TO SCALE

BTA Oil Producers, LLC

20702 Harroun Ranch Fed Com
-Proposed-
Tank Battery
Section 20, T23S-R29E
Eddy County, NM

COPY

APPLICATION FOR DRILLING

BTA OIL PRODUCERS, LLC
#3H, Harroun Ranch Federal Com, 20702
170' FSL & 2465' FWL
Sec. 20, T23S, R29E Surface
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, BTA Oil Producers submits the following 10 items for pertinent information in accordance with BLM requirements:

1. Geologic surface formation is Quaternary.

2. Estimated top of geologic markers & depths of anticipated fresh water, oil or gas:

Anhydrite	290'	
Top of Salt	423'	
Base Salt	2,717'	
Delaware	2,847'	
Cherry Canyon	3,672'	
Brushy Canyon	4,947'	Oil
Bone Spring LM	6,537'	
1st Bone Spring Sand	7,587'	Oil/Gas
2nd Bone Spring Sand	8,334'	Oil/Gas

No other formations are expected to yield oil, gas, or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13-3/8" csg at ~~320'~~ 360' and circulating cement back to surface. Potash/fresh water sands will be protected by setting 9-5/8" csg at 2,815' and circulating cement back to surface. The Delaware and Bone Spring intervals will be isolated by setting 5-1/2" csg to total depth and circulating cement above the base of the 9-5/8" casing.

All shows of fresh water and minerals will be reported and protected. A sample will be taken of any water flows and furnished to the BLM, Division of Minerals. All oil and gas shows will be adequately tested for commercial possibilities, reported and protected.

Note: The first and last take will be no closer than 330' to the nearest section line.

3. Proposed Casing and Cementing Program:

See COA

Hole Size	OD Casing	Setting from	Depth to	Weight	Grade	Joint
17-1/2"	13-3/8"	0	~~320'~~ 360'	54.5#	J55	STC
12-1/4"	9-5/8"	0	2815'	36#	J55	STC
8-3/4"	5-1/2"	0	13,431'	17#	P110	LTC

Minimum Casing Design Factors:

Collapse	1.125
Burst	1.0
Tensile	1.8

Depending upon availability at the time that the casing is run, equivalent weights and grades may be substituted.

All casing will be new.

4. Cement Program:

I. Surface Casing:
- Lead: 220 sx Class-C.
  - 1.75 ft^3/sk; 13.5 ppg
- Tail: 200 sx Class – C.
  - 1.34 ft^3/sk; 14.8 ppg
- Cement circulated to surface. 100% Excess.

II. Intermediate Casing:
- Lead: 510 sx 35:65 Poz-C
  - 1.94 ft^3/sk; 12.7 ppg
- Tail: 250 sx Class– C
  - 1.33 ft^3/sk; 14.8 ppg
- Cement circulated to surface. 60% excess of open hole (will run fluid caliper to determine lead volume).

III. Production Casing:
- Lead: 700 sx 50:50 Class H
  - 2.92 ft^3/sk; 11.3 ppg
- Tail: 950 sx 50:50 Class H
  - 1.22 ft^3/sk; 14.4 ppg
- Cement calculated to tie back 500 ft into intermediate casing. 20% open hole excess.

See COA

Note: All casing strings will be pressure tested to 0.22 psi/ft. of setting depth or 1500 psi (whichever is greater) after cementing and prior to drill out.

5. Pressure Control Equipment:

The blowout preventer equipment (BOP) shown in Exhibit A will consist of a (3M system) double ram type (3000 psi WP) preventer and a bag-type (Hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and 4-½" drill pipe rams on bottom. The BOP's will be installed on the 13-3/8" surface casing and utilized continuously until TD is reached. All BOP's and associated equipment will be tested as per BLM drilling Operations Order No. 2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily driller's log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines, and choke manifold having a 3000 psi WP rating.

6. Mud Program:

Surface to ~~320'~~ 360': 8.5 to 8.8 ppg fresh water spud with 35 to 45 sec/1000 cc viscosity.

~~320' to 2,815'~~: Brine water. Will use lime for pH control in range 10 to 11. Will sweep hole with gel slugs as required for hole cleaning. Mud wt = 10 ppg. See COA

2,815' to TD: 8.6 to 9.2 ppg controlled brine water. Will use lime for pH control in range 10 to 11. Will sweep hole with salt gel slugs as required for hole cleaning. Will use paper for seepage losses. Will adjust fluid weight as required using brine water.

7. Auxiliary Equipment:

a) Upper Kelly cock valve with handle available.
b) Lower Kelly cock valve with handle available.
c) Safety valves and subs to fit all drill string connections in use.
d) Monitoring of mud system will be mechanical.

8. Testing Logging and Coring Program:

Drill Stem Tests will be based on geological sample shows.

Open electrical logging program will be:

i. TD to Surface: Gamma Ray
ii. No coring program is planned.

9. Potential Hazards:

No abnormal pressures or temperatures are anticipated. If H2S is encountered, the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP: 3800 psi. Estimated BHT: 125° F. No H_2S is anticipated to be encountered.

10. Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig is available. Move in operations and drilling is expected to take 25 days. If

production casing is run, an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines to place the well on production.

Note: BLM onsite was conducted on November 25th, 2014 by Indra Dahal. An agreement has been entered into with CEHMM to prepare the EA.

Attachment to APD
BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Sec 20, T23S, R29E
Eddy County, NM

BTA Oil Producers, LLC

Eddy County
Harroun Ranch
Harroun Ranch #3H

Wellbore #1

Plan: Design #1

Standard Planning Report

27 March, 2015

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Harroun Ranch #3H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	GL @ 2986.0usft (Original Well Elev)
Project:	Eddy County	**MD Reference:**	GL @ 2986.0usft (Original Well Elev)
Site:	Harroun Ranch	**North Reference:**	Grid
Well:	Harroun Ranch #3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Eddy County		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site	Harroun Ranch				
Site Position:		**Northing:**	467,011.30 usft	**Latitude:**	32° 17' 0.701 N
From:	*Map*	*Easting:*	*598,545.80 usft*	*Longitude:*	*104° 0' 52.034 W*
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.17 °

Well	Harroun Ranch #3H					
Well Position	**+N/-S**	10.8 usft	**Northing:**	467,022.10 usft	**Latitude:**	32° 17' 0.740 N
	+E/-W	2,284.6 usft	**Easting:**	600,830.20 usft	**Longitude:**	104° 0' 25.422 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	2,987.0 usft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	12/31/2009	7.95	60.22	48,783

Design	Design #1				
Audit Notes:					
Version:		**Phase:**	*PROTOTYPE*	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	353.30	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,192.2	0.00	0.00	3,192.2	0.0	0.0	0.00	0.00	0.00	0.00	
3,517.2	*6.50*	*251.74*	*3,516.5*	*-5.8*	*-17.5*	*2.00*	*2.00*	*0.00*	*251.74*	
7,703.3	6.50	251.74	7,675.7	-154.2	-467.5	0.00	0.00	0.00	0.00	
8,028.3	0.00	0.00	8,000.0	-160.0	-485.0	2.00	-2.00	0.00	180.00	
8,050.8	0.00	0.00	8,022.5	-160.0	-485.0	0.00	0.00	0.00	0.00	
8,800.8	90.00	358.92	8,500.0	317.4	-494.0	12.00	12.00	0.00	358.92	
13,430.9	90.00	358.92	8,500.0	4,946.6	-580.9	*0.00*	*0.00*	*0.00*	*0.00*	Harroun Ranch #3H E

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Harroun Ranch #3H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	GL @ 2986.0usft (Original Well Elev)
Project:	Eddy County	**MD Reference:**	GL @ 2986.0usft (Original Well Elev)
Site:	Harroun Ranch	**North Reference:**	Grid
Well:	Harroun Ranch #3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,192.2	0.00	0.00	3,192.2	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.16	251.74	3,200.0	0.0	0.0	0.0	2.00	2.00	0.00
3,300.0	2.16	251.74	3,300.0	-0.6	-1.9	-0.4	2.00	2.00	0.00
3,400.0	4.16	251.74	3,399.8	-2.4	-7.2	-1.5	2.00	2.00	0.00
3,500.0	6.16	251.74	3,499.4	-5.2	-15.7	-3.3	2.00	2.00	0.00
3,517.2	6.50	251.74	3,516.5	-5.8	-17.5	-3.7	2.00	2.00	0.00
3,600.0	6.50	251.74	3,598.8	-8.7	-26.4	-5.6	0.00	0.00	0.00
3,700.0	6.50	251.74	3,698.1	-12.3	-37.1	-7.8	0.00	0.00	0.00
3,800.0	6.50	251.74	3,797.5	-15.8	-47.9	-10.1	0.00	0.00	0.00
3,900.0	6.50	251.74	3,896.8	-19.3	-58.6	-12.4	0.00	0.00	0.00
4,000.0	6.50	251.74	3,996.2	-22.9	-69.4	-14.6	0.00	0.00	0.00
4,100.0	6.50	251.74	4,095.6	-26.4	-80.1	-16.9	0.00	0.00	0.00
4,200.0	6.50	251.74	4,194.9	-30.0	-90.9	-19.2	0.00	0.00	0.00
4,300.0	6.50	251.74	4,294.3	-33.5	-101.6	-21.4	0.00	0.00	0.00
4,400.0	6.50	251.74	4,393.6	-37.1	-112.4	-23.7	0.00	0.00	0.00
4,500.0	6.50	251.74	4,493.0	-40.6	-123.1	-26.0	0.00	0.00	0.00
4,600.0	6.50	251.74	4,592.3	-44.2	-133.9	-28.3	0.00	0.00	0.00
4,700.0	6.50	251.74	4,691.7	-47.7	-144.6	-30.5	0.00	0.00	0.00
4,800.0	6.50	251.74	4,791.1	-51.3	-155.4	-32.8	0.00	0.00	0.00
4,900.0	6.50	251.74	4,890.4	-54.8	-166.1	-35.1	0.00	0.00	0.00
5,000.0	6.50	251.74	4,989.8	-58.4	-176.9	-37.3	0.00	0.00	0.00
5,100.0	6.50	251.74	5,089.1	-61.9	-187.6	-39.6	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Harroun Ranch #3H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	GL @ 2986.0usft (Original Well Elev)
Project:	Eddy County	**MD Reference:**	GL @ 2986.0usft (Original Well Elev)
Site:	Harroun Ranch	**North Reference:**	Grid
Well:	Harroun Ranch #3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	6.50	251.74	5,188.5	-65.5	-198.4	-41.9	0.00	0.00	0.00
5,300.0	6.50	251.74	5,287.8	-69.0	-209.1	-44.1	0.00	0.00	0.00
5,400.0	6.50	251.74	5,387.2	-72.5	-219.9	-46.4	0.00	0.00	0.00
5,500.0	6.50	251.74	5,486.6	-76.1	-230.6	-48.7	0.00	0.00	0.00
5,600.0	6.50	251.74	5,585.9	-79.6	-241.4	-50.9	0.00	0.00	0.00
5,700.0	6.50	251.74	5,685.3	-83.2	-252.1	-53.2	0.00	0.00	0.00
5,800.0	6.50	251.74	5,784.6	-86.7	-262.9	-55.5	0.00	0.00	0.00
5,900.0	6.50	251.74	5,884.0	-90.3	-273.6	-57.7	0.00	0.00	0.00
6,000.0	6.50	251.74	5,983.3	-93.8	-284.4	-60.0	0.00	0.00	0.00
6,100.0	6.50	251.74	6,082.7	-97.4	-295.1	-62.3	0.00	0.00	0.00
6,200.0	6.50	251.74	6,182.1	-100.9	-305.9	-64.5	0.00	0.00	0.00
6,300.0	6.50	251.74	6,281.4	-104.5	-316.7	-66.8	0.00	0.00	0.00
6,400.0	6.50	251.74	6,380.8	-108.0	-327.4	-69.1	0.00	0.00	0.00
6,500.0	6.50	251.74	6,480.1	-111.6	-338.2	-71.4	0.00	0.00	0.00
6,600.0	6.50	251.74	6,579.5	-115.1	-348.9	-73.6	0.00	0.00	0.00
6,700.0	6.50	251.74	6,678.8	-118.6	-359.7	-75.9	0.00	0.00	0.00
6,800.0	6.50	251.74	6,778.2	-122.2	-370.4	-78.2	0.00	0.00	0.00
6,900.0	6.50	251.74	6,877.6	-125.7	-381.2	-80.4	0.00	0.00	0.00
7,000.0	6.50	251.74	6,976.9	-129.3	-391.9	-82.7	0.00	0.00	0.00
7,100.0	6.50	251.74	7,076.3	-132.8	-402.7	-85.0	0.00	0.00	0.00
7,200.0	6.50	251.74	7,175.6	-136.4	-413.4	-87.2	0.00	0.00	0.00
7,300.0	6.50	251.74	7,275.0	-139.9	-424.2	-89.5	0.00	0.00	0.00
7,400.0	6.50	251.74	7,374.3	-143.5	-434.9	-91.8	0.00	0.00	0.00
7,500.0	6.50	251.74	7,473.7	-147.0	-445.7	-94.0	0.00	0.00	0.00
7,600.0	6.50	251.74	7,573.1	-150.6	-456.4	-96.3	0.00	0.00	0.00
7,700.0	6.50	251.74	7,672.4	-154.1	-467.2	-98.6	0.00	0.00	0.00
7,703.3	6.50	251.74	7,675.7	-154.2	-467.5	-98.6	0.00	0.00	0.00
7,800.0	4.57	251.74	7,771.9	-157.2	-476.4	-100.5	2.00	-2.00	0.00
7,900.0	2.57	251.74	7,871.7	-159.1	-482.3	-101.8	2.00	-2.00	0.00
8,000.0	0.57	251.74	7,971.7	-160.0	-484.9	-102.3	2.00	-2.00	0.00
8,028.3	0.00	0.00	8,000.0	-160.0	-485.0	-102.3	2.00	-2.00	0.00
8,050.8	0.00	0.00	8,022.5	-160.0	-485.0	-102.3	0.00	0.00	0.00
8,100.0	5.90	358.92	8,071.6	-157.5	-485.0	-99.8	12.00	12.00	0.00
8,200.0	17.90	358.92	8,169.3	-136.9	-485.4	-79.3	12.00	12.00	0.00
8,300.0	29.90	358.92	8,260.5	-96.5	-486.2	-39.1	12.00	12.00	0.00
8,400.0	41.90	358.92	8,341.4	-37.9	-487.3	19.2	12.00	12.00	0.00
8,500.0	53.90	358.92	8,408.3	36.1	-488.7	92.9	12.00	12.00	0.00
8,600.0	65.90	358.92	8,458.4	122.4	-490.3	178.8	12.00	12.00	0.00
8,700.0	77.90	358.92	8,489.4	217.3	-492.1	273.2	12.00	12.00	0.00
8,800.0	89.90	358.92	8,500.0	316.5	-494.0	372.0	12.00	12.00	0.00
8,800.8	90.00	358.92	8,500.0	317.4	-494.0	372.8	12.00	12.00	0.00
8,900.0	90.00	358.92	8,500.0	416.5	-495.8	471.5	0.00	0.00	0.00
9,000.0	90.00	358.92	8,500.0	516.5	-497.7	571.0	0.00	0.00	0.00
9,100.0	90.00	358.92	8,500.0	616.5	-499.6	670.6	0.00	0.00	0.00
9,200.0	90.00	358.92	8,500.0	716.5	-501.5	770.1	0.00	0.00	0.00
9,300.0	90.00	358.92	8,500.0	816.5	-503.3	869.6	0.00	0.00	0.00
9,400.0	90.00	358.92	8,500.0	916.4	-505.2	969.1	0.00	0.00	0.00
9,500.0	90.00	358.92	8,500.0	1,016.4	-507.1	1,068.6	0.00	0.00	0.00
9,600.0	90.00	358.92	8,500.0	1,116.4	-509.0	1,168.1	0.00	0.00	0.00
9,700.0	90.00	358.92	8,500.0	1,216.4	-510.9	1,267.7	0.00	0.00	0.00
9,800.0	90.00	358.92	8,500.0	1,316.4	-512.7	1,367.2	0.00	0.00	0.00
9,900.0	90.00	358.92	8,500.0	1,416.3	-514.6	1,466.7	0.00	0.00	0.00
10,000.0	90.00	358.92	8,500.0	1,516.3	-516.5	1,566.2	0.00	0.00	0.00
10,100.0	90.00	358.92	8,500.0	1,616.3	-518.4	1,665.7	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Harroun Ranch #3H
Company:	*BTA Oil Producers, LLC*	**TVD Reference:**	GL @ 2986.0usft (Original Well Elev)
Project:	Eddy County	**MD Reference:**	GL @ 2986.0usft (Original Well Elev)
Site:	Harroun Ranch	**North Reference:**	Grid
Well:	Harroun Ranch #3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	*Design #1*		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,200.0	90.00	358.92	8,500.0	1,716.3	-520.3	1,765.3	0.00	0.00	0.00
10,300.0	90.00	358.92	8,500.0	1,816.3	-522.1	1,864.8	0.00	0.00	0.00
10,400.0	90.00	358.92	8,500.0	1,916.3	-524.0	1,964.3	0.00	0.00	0.00
10,500.0	90.00	358.92	8,500.0	2,016.2	-525.9	2,063.8	0.00	0.00	0.00
10,600.0	90.00	358.92	8,500.0	2,116.2	-527.8	2,163.3	0.00	0.00	0.00
10,700.0	90.00	358.92	8,500.0	2,216.2	-529.6	2,262.9	0.00	0.00	0.00
10,800.0	90.00	358.92	8,500.0	2,316.2	-531.5	2,362.4	0.00	0.00	0.00
10,900.0	90.00	358.92	8,500.0	2,416.2	-533.4	2,461.9	0.00	0.00	0.00
11,000.0	90.00	358.92	8,500.0	2,516.2	-535.3	2,561.4	0.00	0.00	0.00
11,100.0	90.00	358.92	8,500.0	2,616.1	-537.2	2,660.9	0.00	0.00	0.00
11,200.0	90.00	358.92	8,500.0	2,716.1	-539.0	2,760.5	0.00	0.00	0.00
11,300.0	90.00	358.92	8,500.0	2,816.1	-540.9	2,860.0	0.00	0.00	0.00
11,400.0	90.00	358.92	8,500.0	2,916.1	-542.8	2,959.5	0.00	0.00	0.00
11,500.0	90.00	358.92	8,500.0	3,016.1	-544.7	3,059.0	0.00	0.00	0.00
11,600.0	90.00	358.92	8,500.0	3,116.0	-546.6	3,158.5	0.00	0.00	0.00
11,700.0	90.00	358.92	8,500.0	3,216.0	-548.4	3,258.0	0.00	0.00	0.00
11,800.0	90.00	358.92	8,500.0	3,316.0	-550.3	3,357.6	0.00	0.00	0.00
11,900.0	90.00	358.92	8,500.0	3,416.0	-552.2	3,457.1	0.00	0.00	0.00
12,000.0	90.00	358.92	8,500.0	3,516.0	-554.1	3,556.6	0.00	0.00	0.00
12,100.0	90.00	358.92	8,500.0	3,616.0	-555.9	3,656.1	0.00	0.00	0.00
12,200.0	90.00	358.92	8,500.0	3,715.9	-557.8	3,755.6	0.00	0.00	0.00
12,300.0	90.00	358.92	8,500.0	3,815.9	-559.7	3,855.2	0.00	0.00	0.00
12,400.0	90.00	358.92	8,500.0	3,915.9	-561.6	3,954.7	0.00	0.00	0.00
12,500.0	90.00	358.92	8,500.0	4,015.9	-563.5	4,054.2	0.00	0.00	0.00
12,600.0	90.00	358.92	8,500.0	4,115.9	-565.3	4,153.7	0.00	0.00	0.00
12,700.0	90.00	358.92	8,500.0	4,215.9	-567.2	4,253.2	0.00	0.00	0.00
12,800.0	90.00	358.92	8,500.0	4,315.8	-569.1	4,352.8	0.00	0.00	0.00
12,900.0	90.00	358.92	8,500.0	4,415.8	-571.0	4,452.3	0.00	0.00	0.00
13,000.0	90.00	358.92	8,500.0	4,515.8	-572.9	4,551.8	0.00	0.00	0.00
13,100.0	90.00	358.92	8,500.0	4,615.8	-574.7	4,651.3	0.00	0.00	0.00
13,200.0	90.00	358.92	8,500.0	4,715.8	-576.6	4,750.8	0.00	0.00	0.00
13,300.0	90.00	358.92	8,500.0	4,815.7	-578.5	4,850.4	0.00	0.00	0.00
13,400.0	90.00	358.92	8,500.0	4,915.7	-580.4	4,949.9	0.00	0.00	0.00
13,430.9	90.00	358.92	8,500.0	4,946.6	-580.9	4,980.6	0.00	0.00	0.00
Harroun Ranch #3H BHL									

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
Harroun Ranch #3H BHL - plan hits target center - Point	0.00	0.00	8,500.0	4,946.6	-580.9	471,968.30	600,249.30	32° 17' 49.706 N	104° 0' 32.015 W

Azimuths to Grid North
True North: -0.17°
Magnetic North: 7.78°

Magnetic Field
Strength: 48783.3snT
Dip Angle: 60.22°
Date: 12/31/2009
Model: IGRF200510

WELL DETAILS: Harroun Ranch #3H

Ground Level: 2987.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	467022.10	600830.20	32° 17' 0.740 N	104° 0' 25.422 W

BTA Oil Producers, LLC

SITE DETAILS: Harroun Ranch

Site Centre Northing: 467011.30
Easting: 598545.80

Positional Uncertainity: 0.0
Convergence: 0.17
Local North: Grid

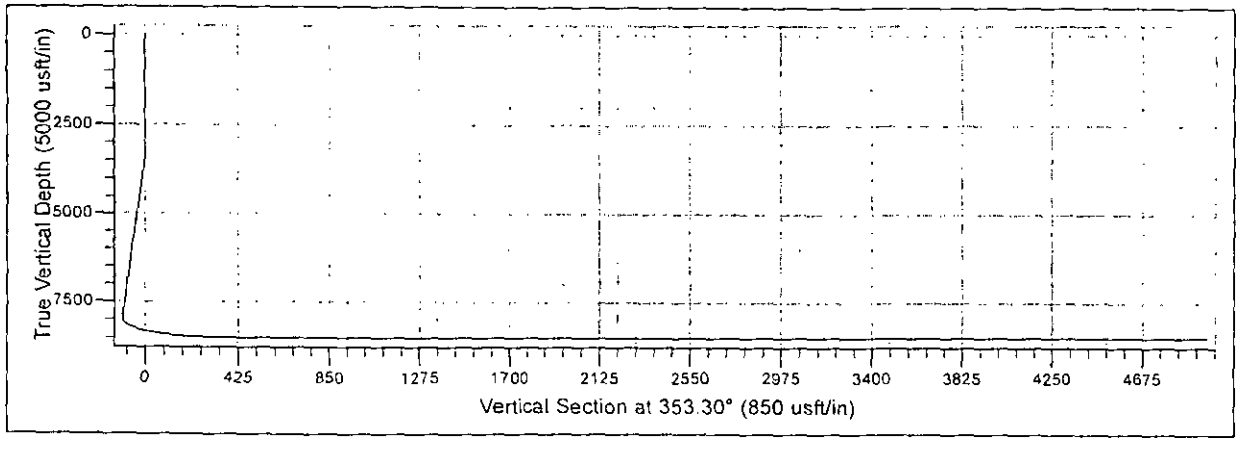
PROJECT DETAILS: Eddy County

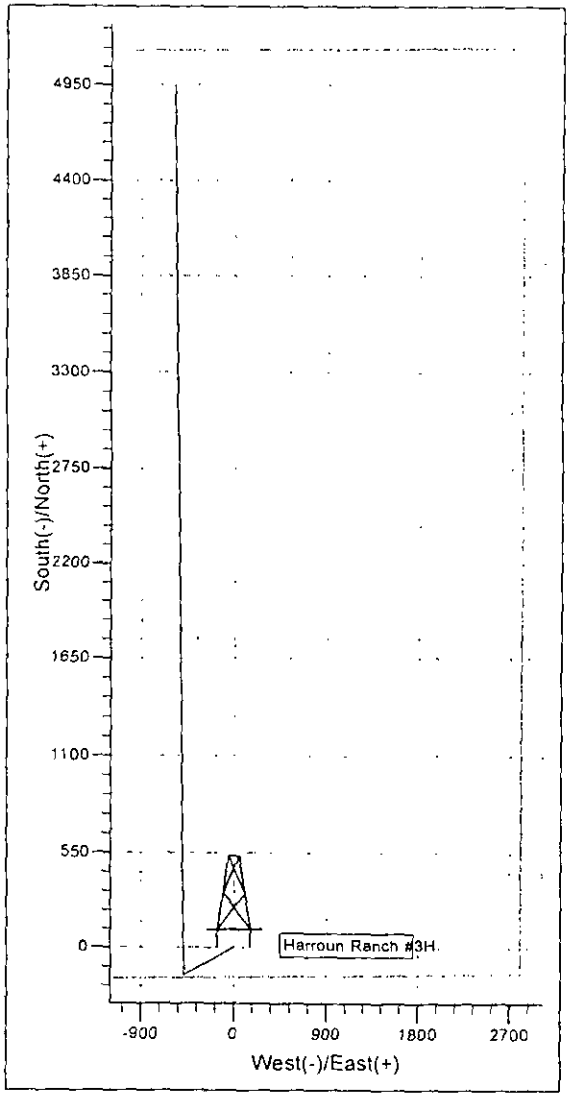
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001

System Datum: Ground Level

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	*Annotation*
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2900.0	0.00	0.00	2900.0	0.0	0.0	0.00	0.00	0.0	
3192.2	0.00	0.00	3192.2	0.0	0.0	0.00	0.00	0.0	
3517.2	6.50	251.74	3516.5	-5.8	-17.5	2.00	251.74	-3.7	
7703.3	6.50	251.74	7675.7	-154.2	-467.5	0.00	0.00	-98.6	
8028.3	0.00	0.00	8000.0	-160.0	-485.0	2.00	180.00	-102.3	
8050.8	0.00	0.00	8022.5	-160.0	-485.0	0.00	0.00	-102.3	
8800.8	90.00	358.92	8500.0	317.4	-494.0	12.00	358.92	372.8	
13430.9	90.00	358.92	8500.0	4946.6	-580.9	0.00	0.00	4980.6	Harroun Ranch #3H BHL





COPY

Attachment to APD
BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Sec 20, T23S, R29E
Eddy County, NM

COPY

The 13-5/8" blowout preventer equipment (BOP) shown in exhibit A will consist of a (3M system) double ram type (3000 psi WP) preventer and a bag type (Hydril) preventer (3000 psi WP). Will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. The BOP's will be installed don the 13-3/8" casing and utilized continuously until TD is reached. All BOP's and associated equipment will be tested as per BLM drilling operations order No 2.

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having a 3000 psi WP rating.

Attachment to APD
BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Sec 20, T23S, R29E
Eddy County, NM

COPY

3,000 psi BOP Schematic

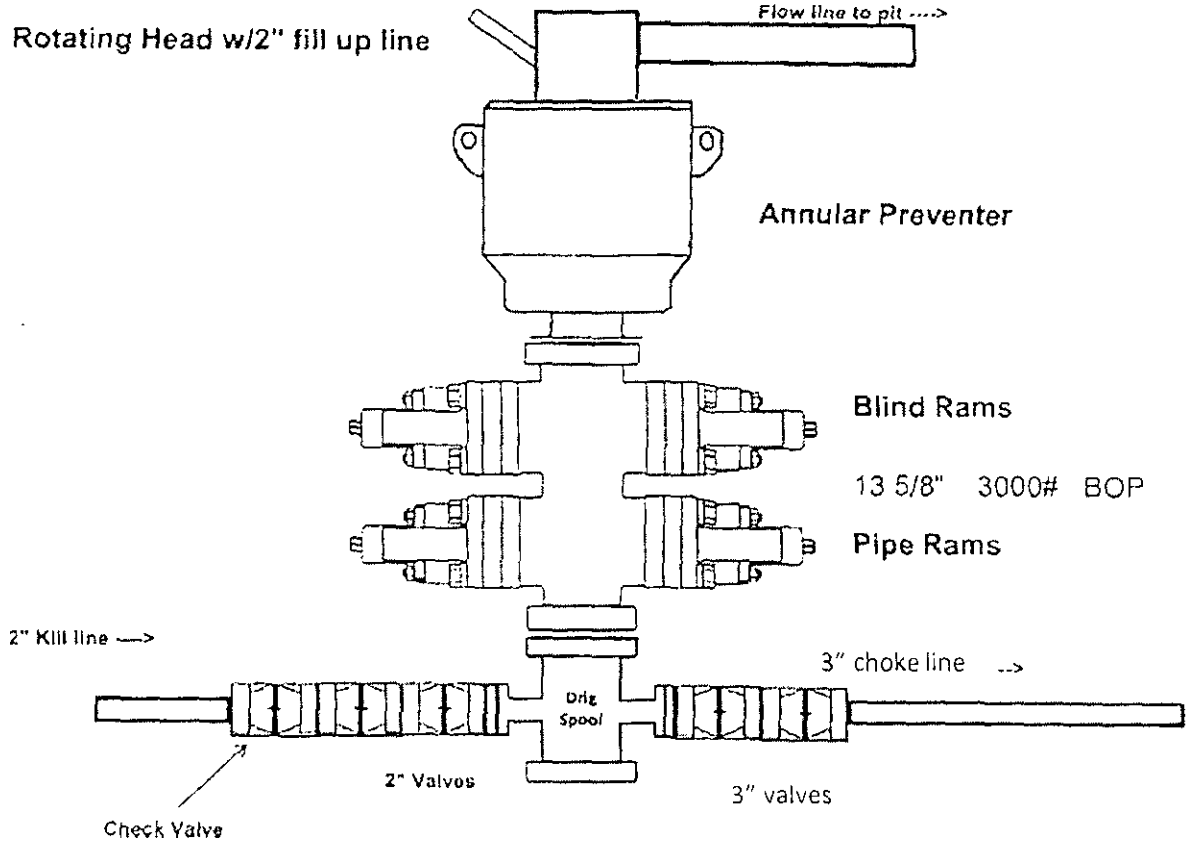
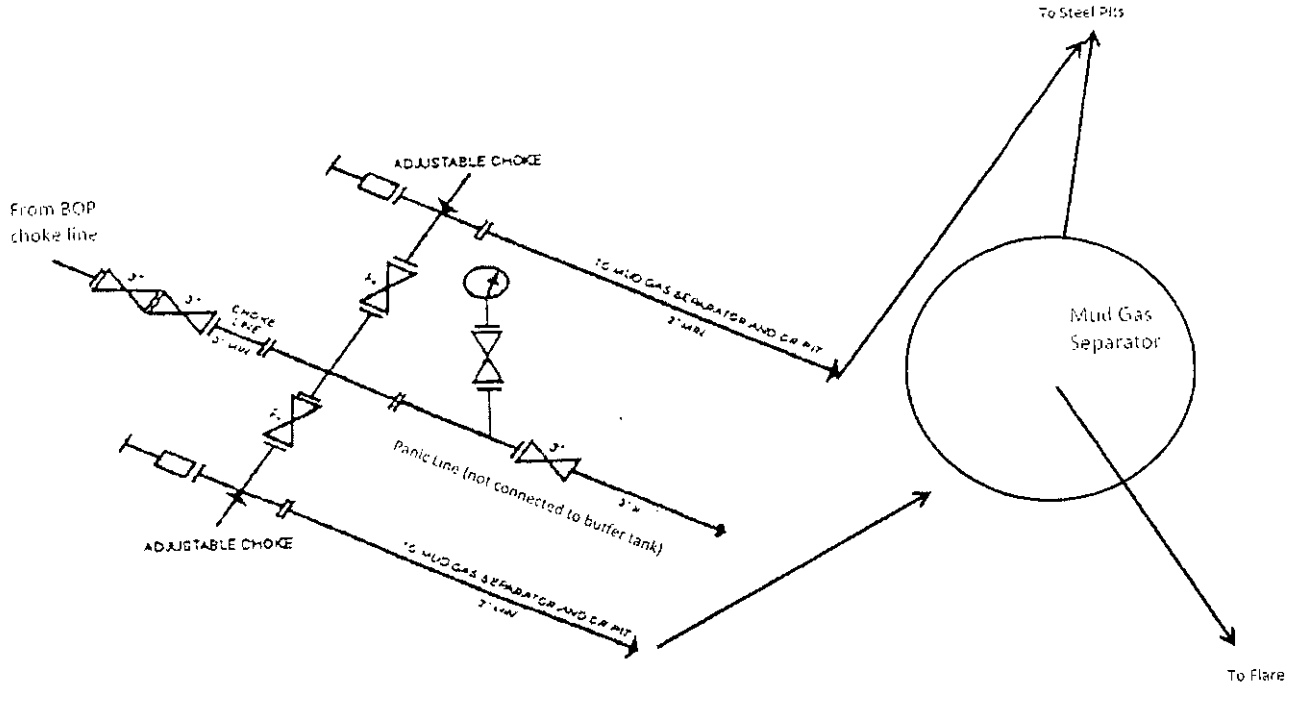


Exhibit A

Attachment to APD
BTA Oil Producers, LLC
20702 Harroun Ranch Fed Com #3H
Sec 20, T23S, R29E
Eddy County, NM

COPY



3M choke manifold design

Exhibit A1

BTA OIL PRODUCERS LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE 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:

a. The hazards and characteristics of hydrogen sulfide (H_2S).
b. The proper use and maintenance of personal protective equipment and life support systems.
c. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
d. The proper techniques for first aid and rescue procedures.

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

a. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
b. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
c. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

2. H_2S SAFETY EQUIPMENT AND SYSTEMS

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 H2S. If H2S greater than 100 ppm is encountered in the gas stream we will shut in and install H2S equipment.

a. Well Control Equipment:
   Flare line.
   Choke manifold with remotely operated choke.
   Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
   Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.
b. Protective equipment for essential personnel:
   Mark II Surviveair 30-minute units located in the dog house and at briefing areas.
c. H2S detection and monitoring equipment:
   2 - portable H2S monitor positioned on location for best coverage and

response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.

d. Visual warning systems:
Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

e. Mud Program:
The mud program has been designed to minimize the volume of H2S circulated to the surface.

f. Metallurgy:
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

g. Communication:
Company vehicles equipped with cellular telephone.

BTA OIL PRODUCERS LLC has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore, we do not believe that an H2S contingency plan is necessary.

WARNING

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

1. ***BEARDS OR CONTACT LENSES NOT ALLOWED***
2. ***HARD HATS REQUIRED***
3. ***SMOKING IN DESIGNATED AREAS ONLY***
4. ***BE WIND CONSCIOUS AT ALL TIMES***
5. ***CK WITH BTA OIL PRODUCERS LLC FOREMAN AT MAIN OFFICE***

BTA OIL PRODUCERS LLC

1-432-682-3753

EMERGENCY CALL LIST

	OFFICE	MOBILE
BTA OIL PRODUCERS, LLC OFFICE	432-682-3753	
BEN GRIMES, Operations	432-682-3753	432-559-4309
NICK EATON, Drilling	432-682-3753	432-260-7841

EMERGENCY RESPONSE NUMBERS

	OFFICE
STATE POLICE	575-748-9718
EDDY COUNTY SHERIFF	575-746-2701
EMERGENCY MEDICAL SERVICES (AMBULANCE)	911 or 575-746-2701
EDDY COUNTY EMERGENCY MANAGEMENT (HARRY BURGESS)	575-887-9511
STATE EMERGENCY RESPONSE CENTER (SERC)	575-476-9620
CARLSBAD POLICE DEPARTMENT	575-885-2111
CARLSBAD FIRE DEPARTMENT	575-885-3125
NEW MEXICO OIL CONSERVATION DIVISION	575-748-1283
INDIAN FIRE & SAFETY	800-530-8693
HALLIBURTON SERVICES	800-844-8451

OPERATOR CERTIFICATION

BTA OIL PRODUCERS, LLC
#3H, Harroun Ranch Federal Com, 20702
170' FSL & 2465' FWL
UL -N-, Sec. 20, T23S, R29E Surface
210' FNL & 1900' FWL
UL -C-, Sec. 20, T23S, R29E Bottom
Eddy County, New Mexico

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 that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and 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 USC 1001 for the filing of false statements. Executed this 8th day of June, 2015.

Signed: Kayla McConnell

Printed Name: Kayla McConnell
Position: Regulatory Analyst
Address: 104 S Pecos, Midland, TX 79701
Telephone: (432) 682-3753
Field Representative: Nick Eaton, Drilling Manager
E-mail: kmcconnell@btaoil.com

COPY

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**BTA Oil Producers, LLC**
LEASE NO.:	**NMNM-119271**
WELL NAME & NO.:	**Harroun Ranch Fed Com 3H**
SURFACE HOLE FOOTAGE:	**0170' FSL & 2465' FWL**
BOTTOM HOLE FOOTAGE	**0210' FNL & 1900' FWL**
LOCATION:	**Section 20, T. 23 S., R 29 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Communitization Agreement
A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales. In addition, the well sign shall include the surface and bottom hole lease numbers. If the Communitization Agreement number is known, it shall also be on the sign. If not, it shall be placed on the sign when the sign is replaced.

Cave and Karst

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

Cave/Karst Surface Mitigation

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

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

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

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

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

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

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

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

Cave/Karst Subsurface Mitigation

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

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

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

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

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

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

Pressure Testing:

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

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

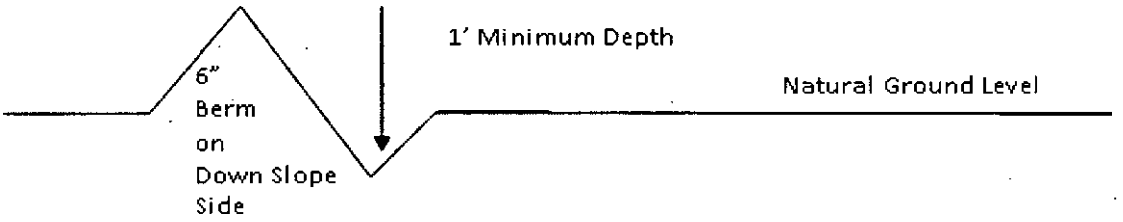
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattleguards

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

Fence Requirement

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

Public Access

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

Construction Steps

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

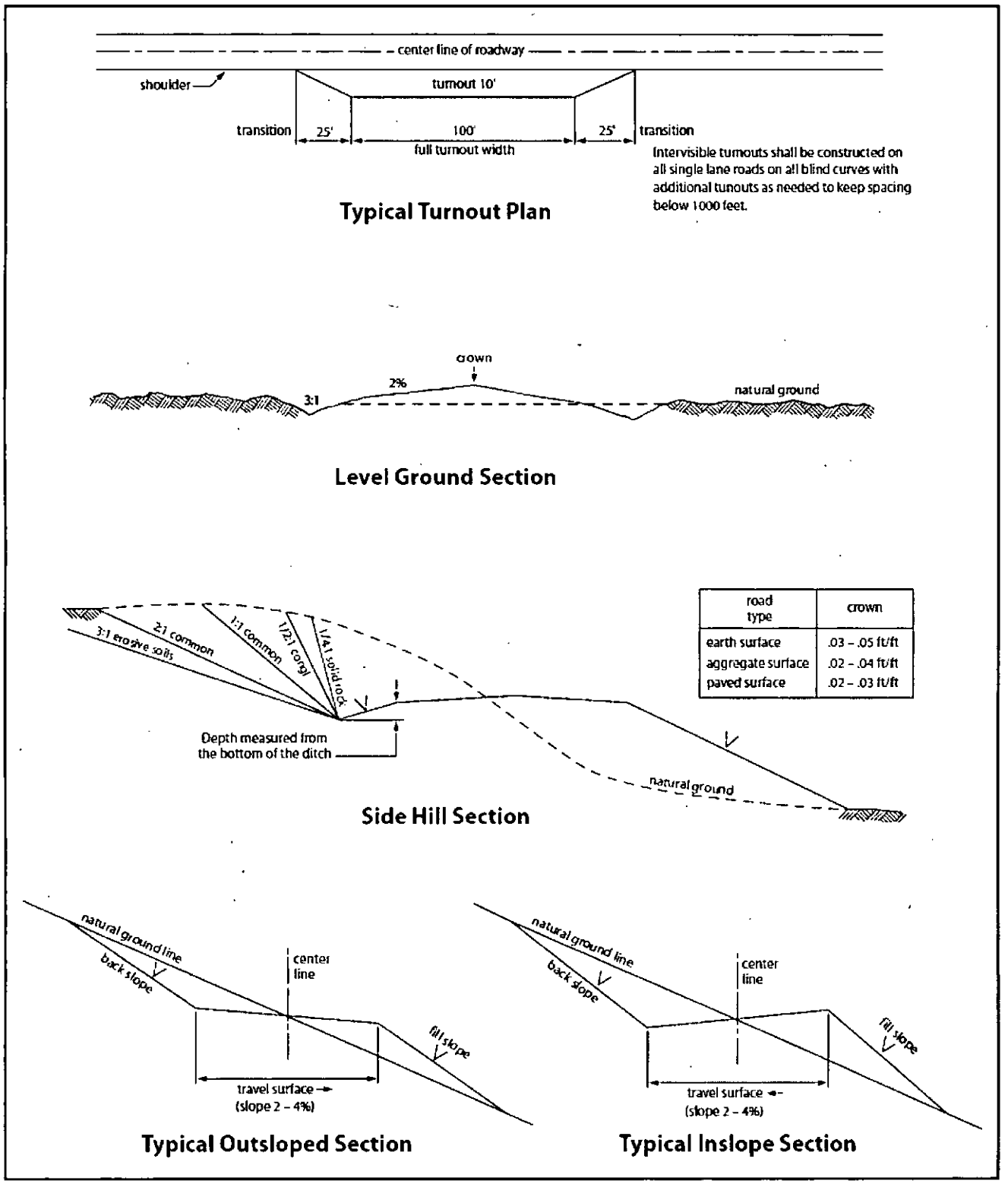


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**

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

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

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

B. CASING

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

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

Wait on cement (WOC) for Water Basin:

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

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

Medium Cave/Karst
Possible water flows in the Salado and Castile.
Possible lost circulation in the Rustler and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **360** feet and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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

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

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

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

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

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

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

   ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Excess calculates to 14% - Additional cement may be required.**

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

C. PRESSURE CONTROL

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

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

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

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

   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

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

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

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

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

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

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

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

JAM 080715

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

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

B. PIPELINES
STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

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

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

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

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

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

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

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

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

c. Acts of God.

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

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

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

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

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

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

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

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

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

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

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

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

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

be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

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

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

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

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

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

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to

the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land

shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

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

IX. INTERIM RECLAMATION

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

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

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

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

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

X. FINAL ABANDONMENT & RECLAMATION

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

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory

revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

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

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

Seed Mixture 2, for Sandy Sites

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

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

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

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

*Pounds of pure live seed:

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