OCD Artesia

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB N O. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM04557

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
891000326X

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

8. Well Name and No.
BIG EDDY UNIT DI 4 271H

2. Name of Operator
BOPCO LP
Contact: LESLIE BARNES
E-Mail: lbarnes@basspet.com

9. API Well No.
30-015-42652

3a. Address
P O BOX 2760
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-221-7341

10. Field and Pool, or Exploratory
WILLIAMS SINK

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 5 T20S R31E Lot 2 700FNL 2100FEL
32.362722 N Lat, 103.532108 W Lon

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

BOPCO L.P. requests to change the legal surface location for the BEU DI 4 271H from the permitted footage calls of 700? FNL & 2,100? FEL of Sec 5, T20S-R31E to new footage calls located at 358? FNL & 2,078? FEL of Sec 5, T20S-R31E. The move is to allow proper surface placement of well heads on the drilling island to allow simultaneous completions operations.
A 4-1/2?, 11.60 ppf, HCP-110, BTC by 7?, 26 ppf, HCP-110, BTC tapered string will be will be ran from TD of the well to surface. The depth of the crossover from 4-1/2? to 7? will be approximately +/- 8,938?. A DV tool will be placed at approximately 5,000? and the 4-1/2? by 7? casing string will be cemented in two stages. Top of cement of stage 2 will be placed at least 50? above the top of the Capitan Reef at 2,854?. The updated directional plan is attached. Casing safety factors are as follows (based on an 8.9 ppg MW):

4-1/2?, 11.60 ppf, HCP-110, BTC - Collapse ? 1.81, Burst ? 2.10, Tension ? 4.01

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 27 2014
RECEIVED

Accepted for record
NMOCD 10/27/14

Eng. Review - JAM - 10/22/14 - new COAs

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

Electronic Submission #266921 verified by the BLM Well Information System
For BOPCO LP, sent to the Carlsbad
Committed to AFMSS for processing by JENNIFER MASON on 10/01/2014 (15JAM0002SE)

Name *(Printed/Typed)* JEREMY BRADEN — Title ENGINEERING ASSISTANT

Signature (Electronic Submission) — Date 09/29/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Stephen J Caffey — Title — Date 10/22/14

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

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

** BLM REVISED ** BLM REVISED

Additional data for EC transaction #266921 that would not fit on the form

32. Additional remarks, continued

7?, 26 ppf, HCP-110, BTC ? Collapse ? 1.69, Burst ? 2.06, Tension ? 3.57

Updated cement volumes and slurries are in the attached table.

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and 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
30-015-42652	97650	WC WILLIAM SINK (BONE SPRING)

Property Code	Property Name	Well Number
305860	BIG EDDY UNIT	271H

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3470'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 2	5	20 S	31 E		358	NORTH	2078	EAST	EDDY

Bottom Hole Location If Different From Surface

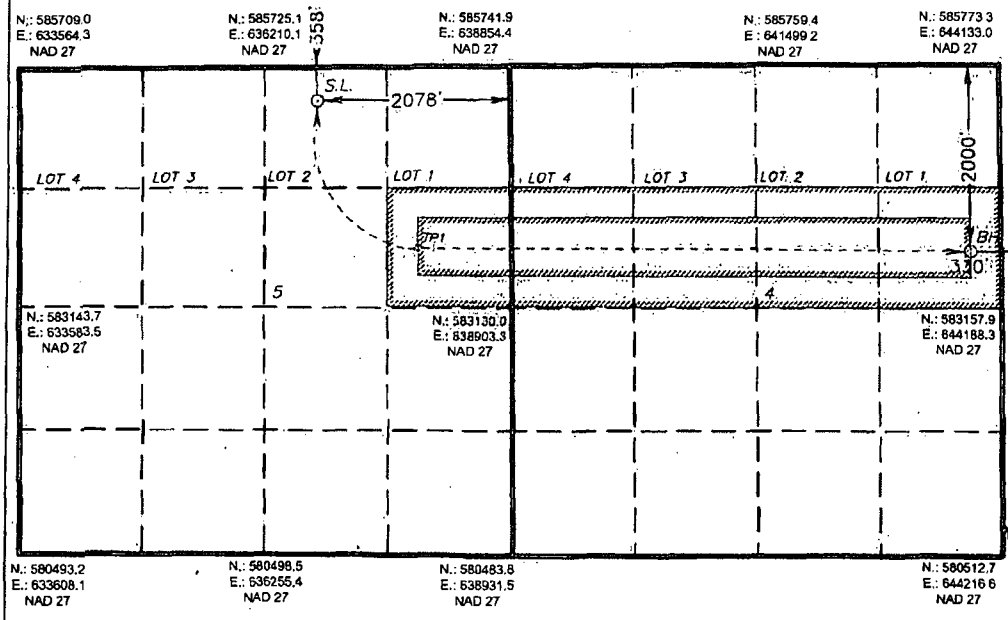
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	4	20 S	31 E		2000	NORTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
200			

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

SURFACE LOCATION
Lat - N 32°36'30.65"
Long - W 103°53'20.91"
NMSPCE- N 585370.7
E 636782.9
(NAD-27)

PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°36'14.50"
Long - W 103°51'59.39"
NMSPCE- N 583771.9
E 643760.6
(NAD-27)



OPERATOR CERTIFICATION

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

Jeremy Braden 10-3-14
Signature Date

Jeremy Braden
Printed Name

jabraden@basspet.com
Email 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 supervison, and that the same is true and correct to the best of my belief.

JANUARY 15, 2014
Date Surveyed

Signature & Seal of Professional Surveyor

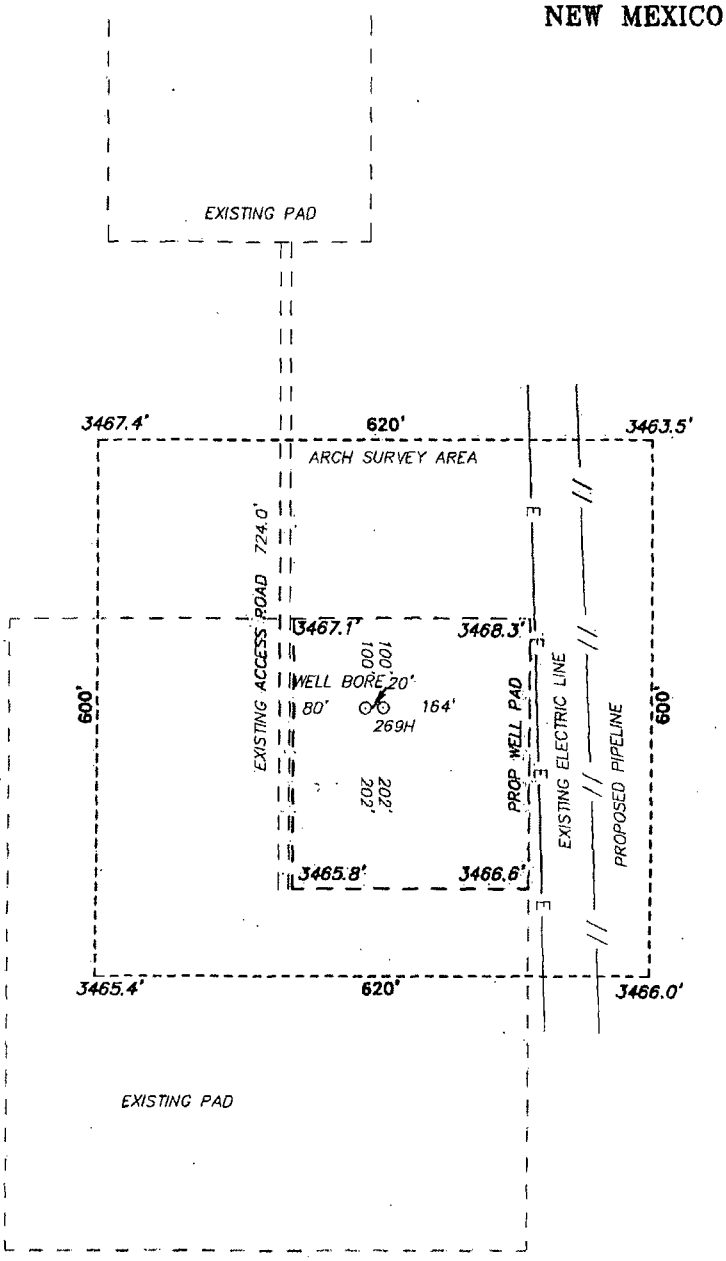
NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number Gary L. Jones 7977
BASIN SURVEYS

0' 1500' 3000' 4500' 6000'
SCALE: 1" = 3000'
WO Num.: 30890

SECTION 5, TOWNSHIP 20 SOUTH, RANGE 31 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



BOPCO, L.P.
BIG EDDY UNIT 271H
ELEV. - 3470'
Lat - N 32°36'30.65"
Long - W 103°53'20.91"
NMSPCE- N 585370.7
E 636782.9
(NAD-27)

CARLSBAD, NM IS ±24 MILES TO THE SOUTHWEST OF LOCATION.

200 0 200 400 FEET
SCALE: 1" = 200'

Directions to Location:

FROM HWY 360 AND CO. RD. 222, GO EAST ON SHUGART FOR 4.0 MILES TURNING SOUTHWEST 1.4 MILES TO EXISTING LEASE ROAD DUE SOUTH TO PROPOSED LOCATION.

BOPCO, L.P.

REF: BIG EDDY UNIT 271H / WELL PAD TOPO

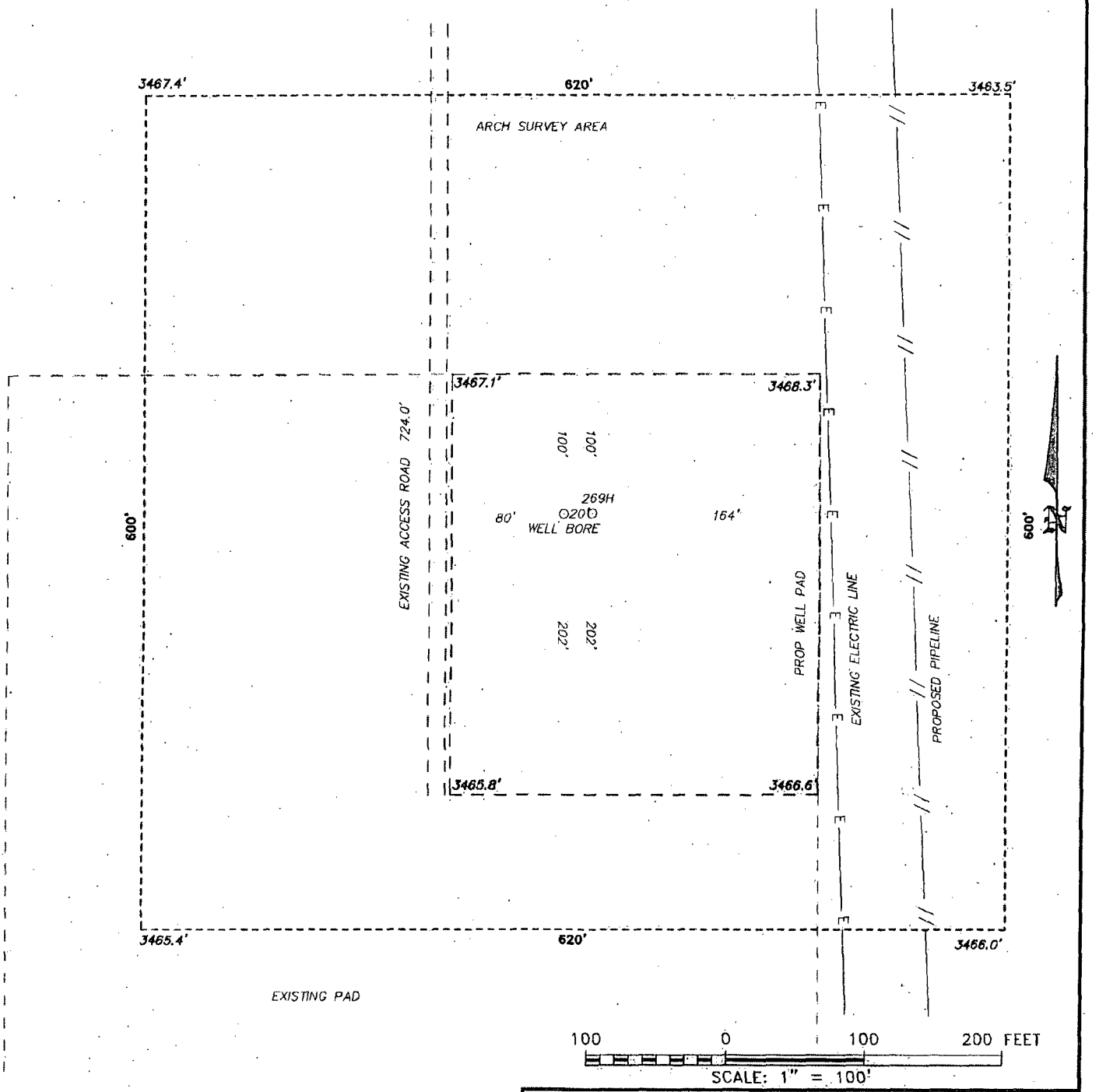
THE BIG EDDY UNIT 271H LOCATED 358' FROM THE NORTH LINE AND 2078' FROM THE EAST LINE OF SECTION 5, TOWNSHIP 20 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

Basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: 30890	Drawn By: K. NORRIS	Date: 08-25-2014	Survey Date: 08-22-2014	Sheet 1 of 1 Sheets

SECTION 5, TOWNSHIP 20 SOUTH, RANGE 31 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



BOPCO, L.P.

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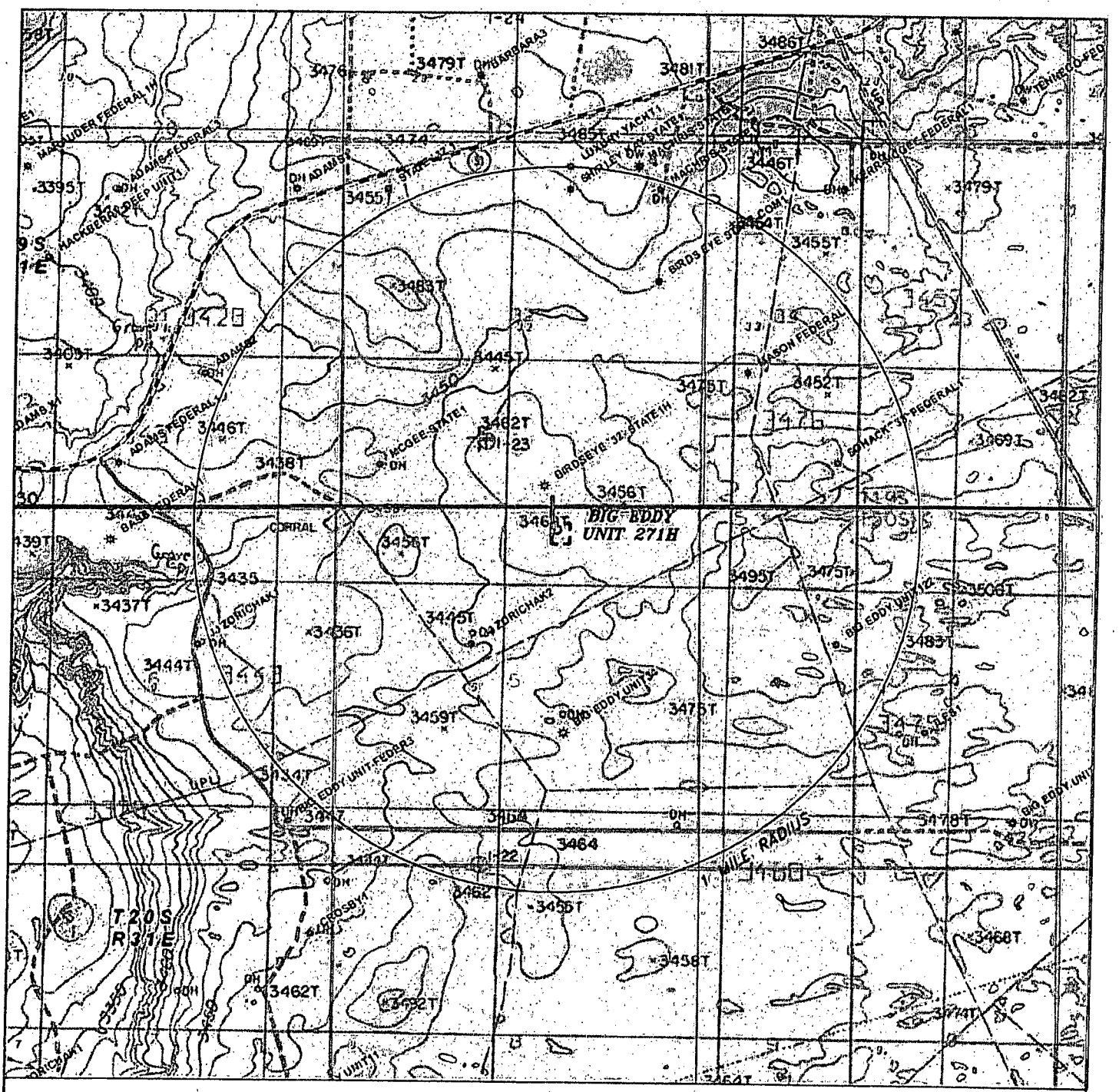

BIG EDDY UNIT 271H

Located 358' FNL and 2078' FEL
Section 5, Township 20 South, Range 31 East,
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0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'

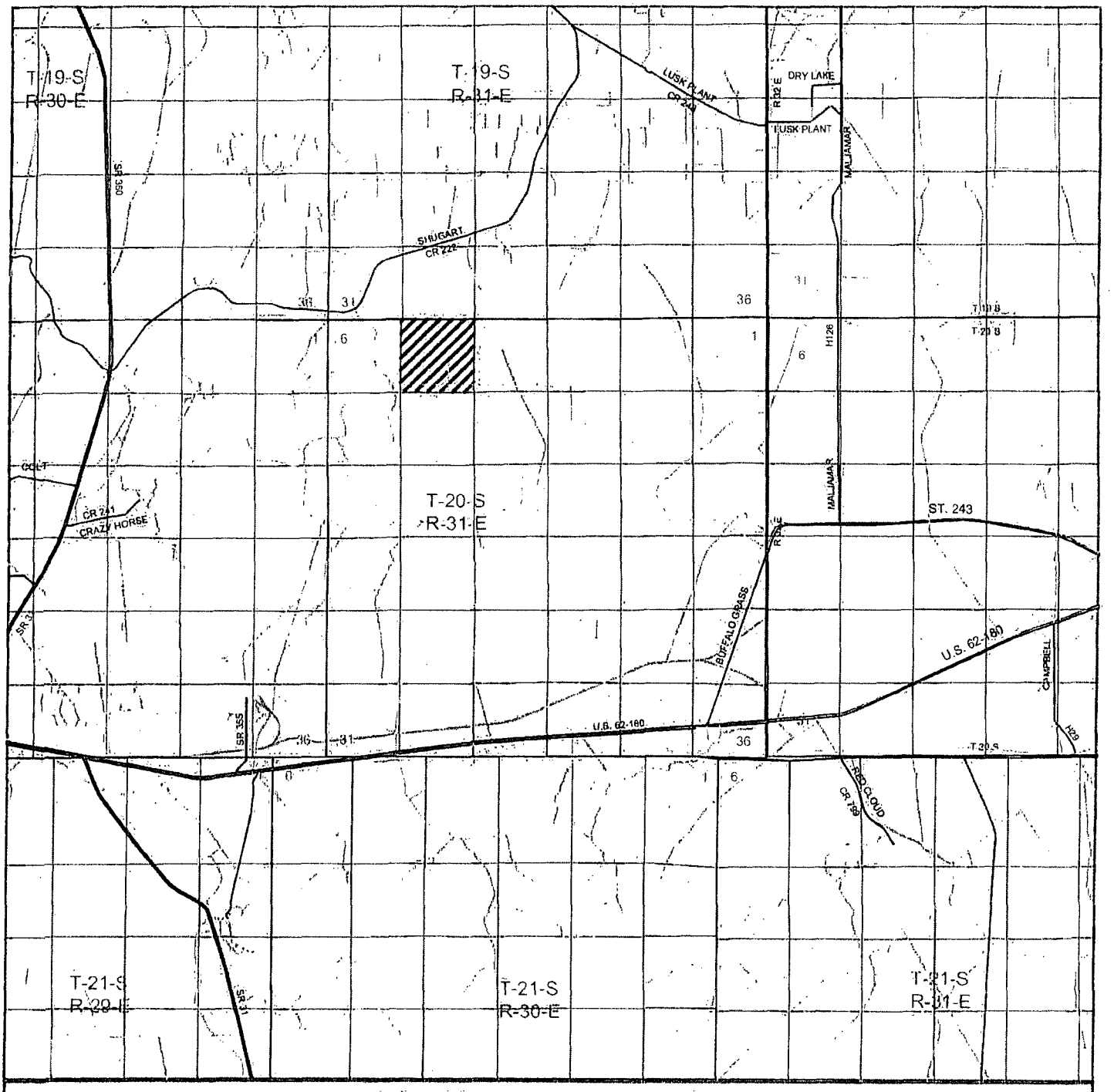
W.O. Number: KAN 30890

Survey Date: 08-22-2014

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

BOPCO, L.P.



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0 1 MI 2 MI 3 MI 4 MI
SCALE: 1" = 2 MILES

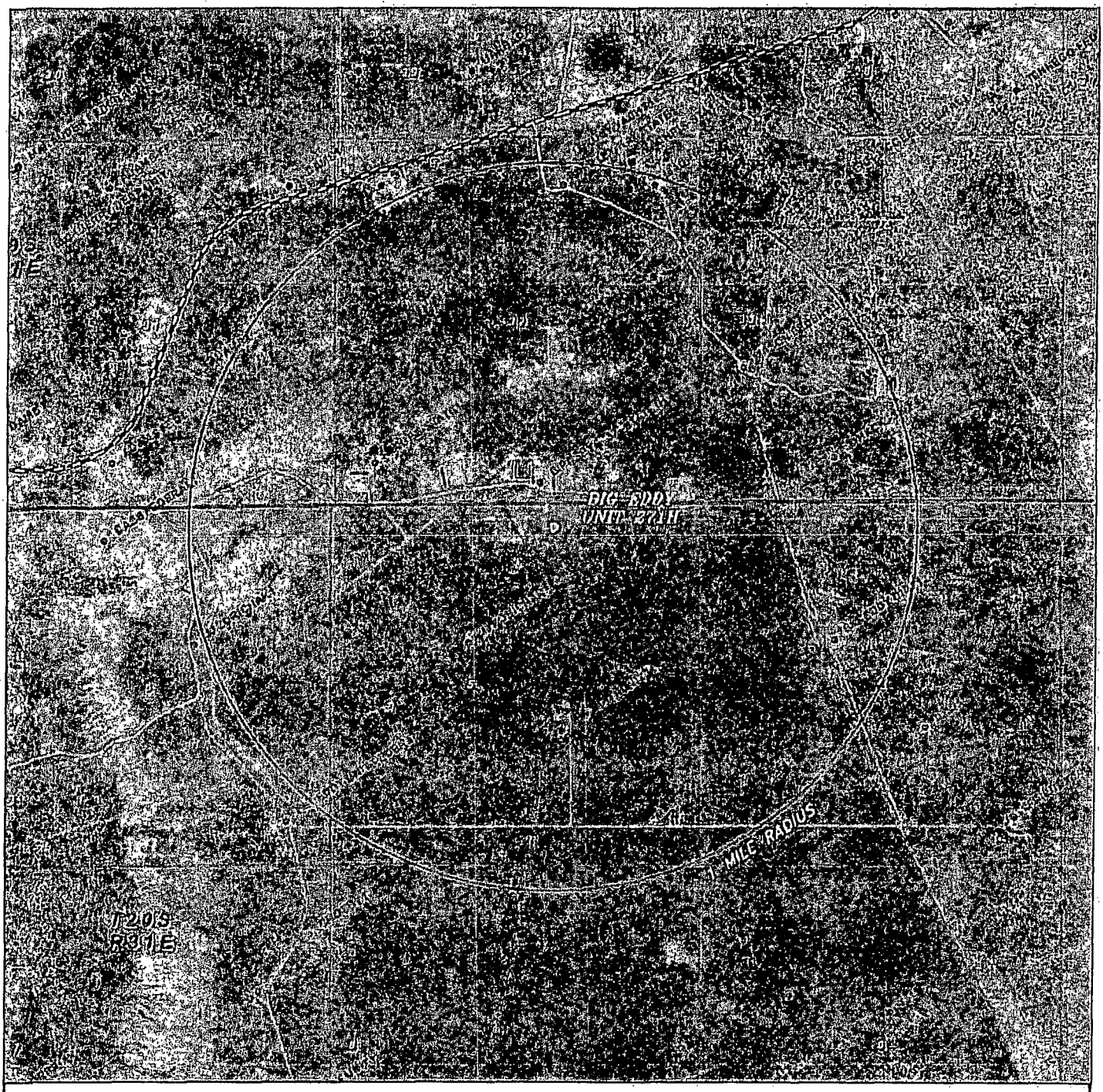
W.O. Number: KAN 30890

Survey Date: 08-22-2014

YELLOW TINT – USA LAND
BLUE TINT – STATE LAND
NATURAL COLOR – FEE LAND

N

BOPCO, L.P.



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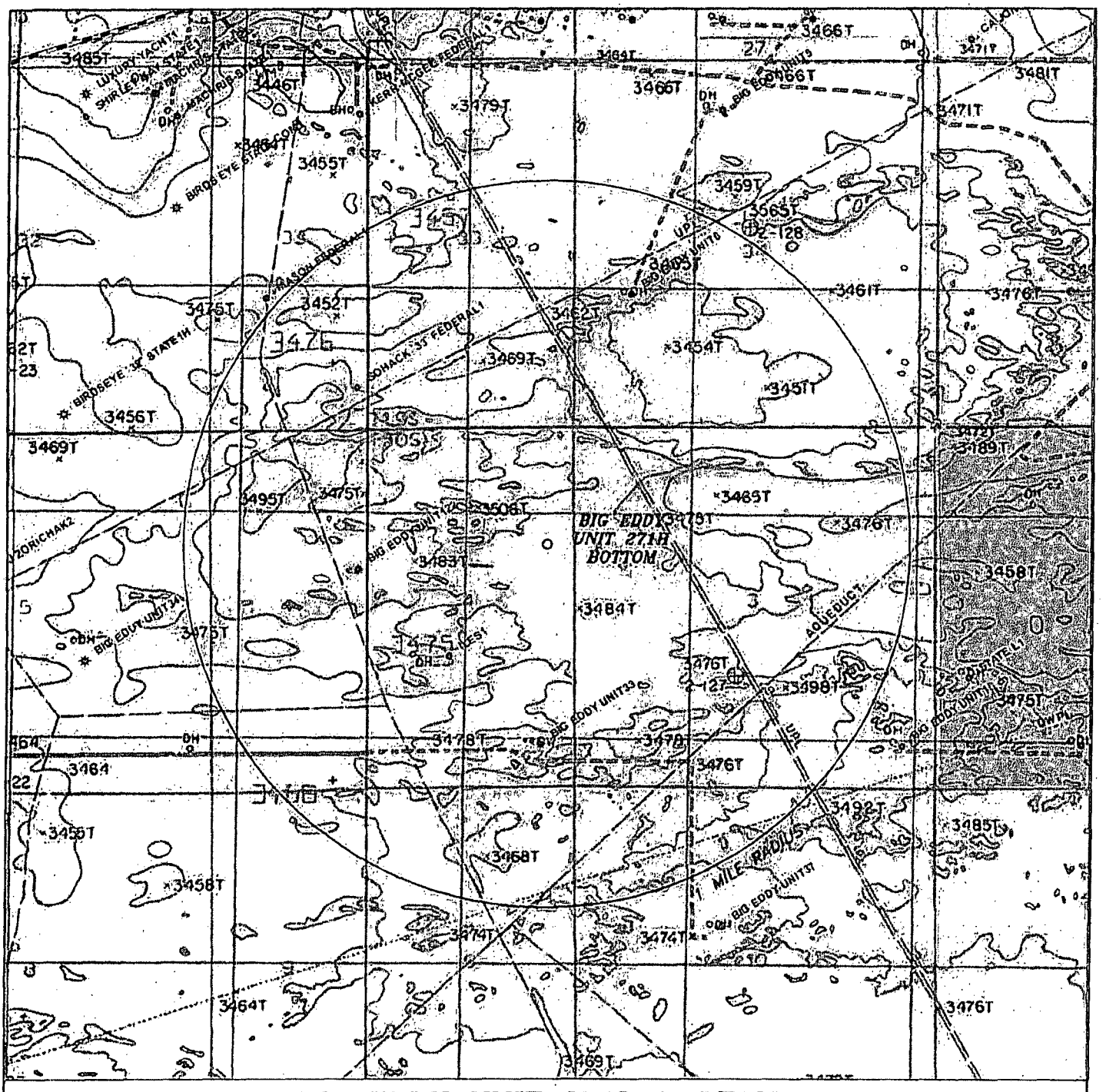

BIG EDDY UNIT 271H BOTTOM

Located 2000' FNL and 330' FEL

Section 4, Township 20 South, Range 31 East, N.M.P.M., Eddy County, New Mexico.

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(575) 392-2206 - Fax
basinsurveys.com

0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

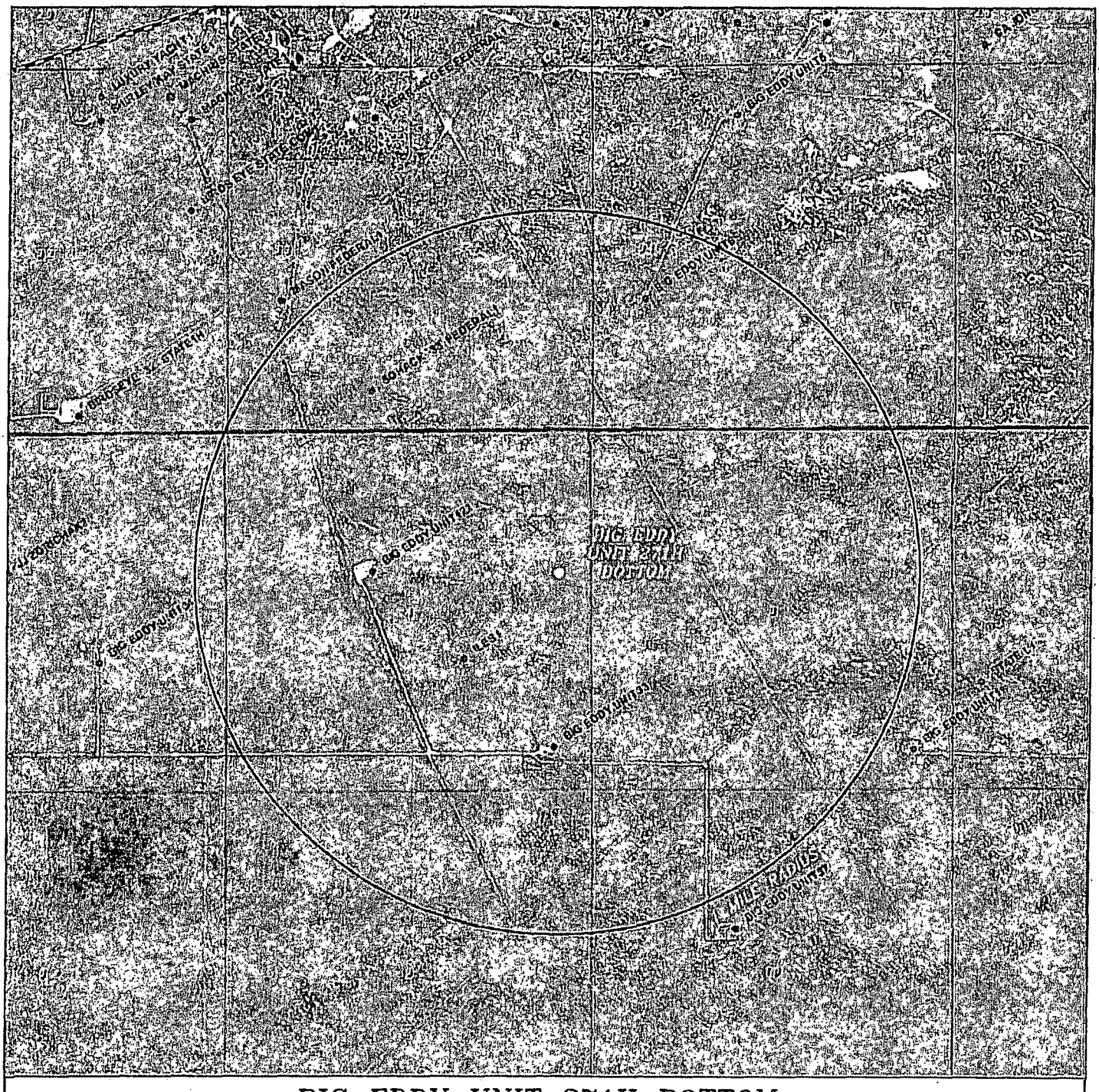
W.O. Number: KAN 30890

Survey Date: 08-22-2014

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

BOPCO, L.P.



BIG EDDY UNIT 271H BOTTOM

Located 2000' FNL and 330' FEL

Section 4, Township 20 South, Range 31 East,

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0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

W.O. Number: KAN 30890

Survey Date: 08-22-2014

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

BOPCO, L.P.

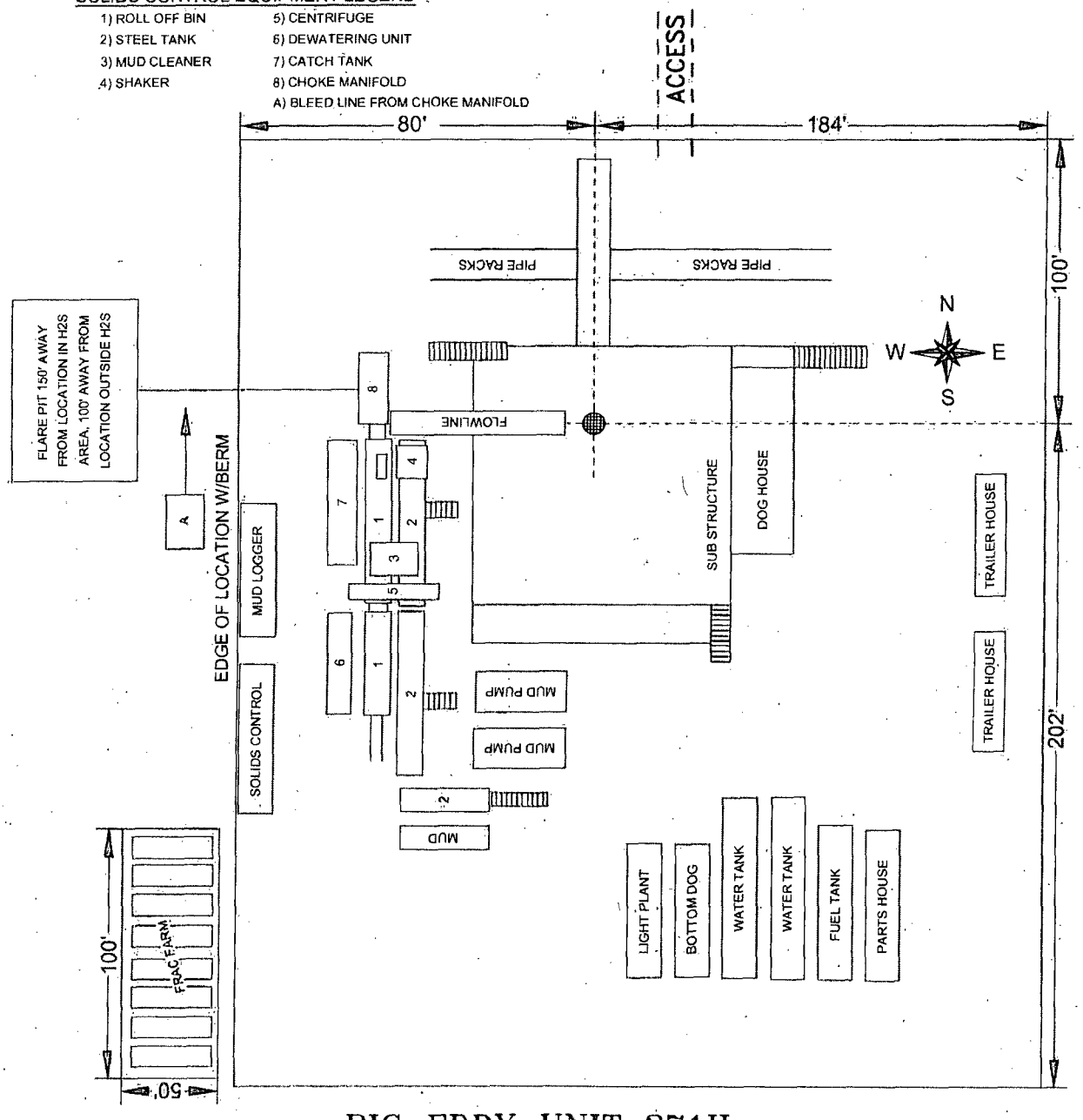
EXHIBIT "D"

RIG LAYOUT SCHEMATIC

INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

SOLIDS CONTROL EQUIPMENT LEGEND

1) ROLL OFF BIN
2) STEEL TANK
3) MUD CLEANER
4) SHAKER
5) CENTRIFUGE
6) DEWATERING UNIT
7) CATCH TANK
8) CHOKE MANIFOLD
A) BLEED LINE FROM CHOKE MANIFOLD



BIG EDDY UNIT 271H

Located 358' FNL and 2078' FEL

Section 5, Township 20 South, Range 31 East,

N.M.P.M., Eddy County, New Mexico.

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SCALE: NONE

W.O. Number: KAN 30890

Survey Date: 08-22-2014

N

BOPCO, L.P.

BOPCO L.P. requests to change the legal surface location for the BEU DI 4 271H from the permitted footage calls of 700' FNL & 2,100' FEL of Sec 5, T20S-R31E to new footage calls located at 358' FNL & 2,078' FEL of Sec 5, T20S-R31E. The move is to allow proper surface placement of well heads on the drilling island to allow simultaneous completions operations.

A 4-1/2", 11.60 ppf, HCP-110, BTC by 7", 26 ppf, HCP-110, BTC tapered string will be will be ran from TD of the well to surface. The depth of the crossover from 4-1/2" to 7" will be approximately +/- 8,938'. A DV tool will be placed at approximately 5,000' and the 4-1/2" by 7" casing string will be cemented in two stages. Top of cement of stage 2 will be placed at least 50' above the top of the Capitan Reef at 2,854'. The updated directional plan is attached. Casing safety factors are as follows (based on an 8.9 ppg MW):

4-1/2", 11.60 ppf, HCP-110, BTC - Collapse – 1.81, Burst – 2.10, Tension – 4.01

7", 26 ppf, HCP-110, BTC – Collapse – 1.69, Burst – 2.06, Tension – 3.57

Updated cement volumes and slurries are in the below table.

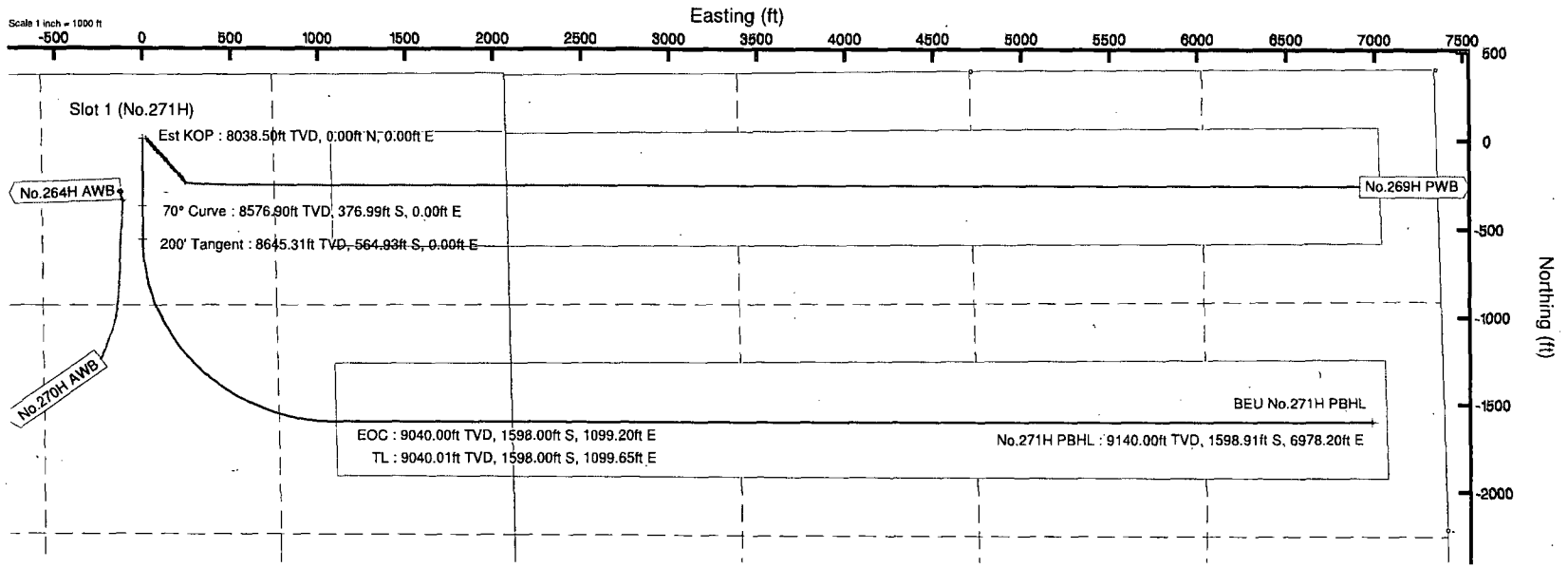
INTERVAL	AMOUNT SXS	FT of FILL	TYPE	GAL/SX	PPG	FT3/SX
PRODUCTION						
Stage 1						
Lead: 5,000'-8,038'	350	3,411'	VersaCem + 10% Bentonite + 0.125 pps Poly-E-Flake + 0.5 pps D-Air + 0.1% HR-601	12.8	11.9	2.24
Tail: 8,038'-16,548'	2960	8,510'	VersaCem + 0.5% LAP-1 + 0.3% CFR-3 + 0.1% FWCA + 0.125 pps Poly-E-Flake + 0.5 pps D-Air + 0.2% HR-601	5.32	14.5	1.21
DV TOOL AT 5,000'						
Stage 2						
Lead: 2,854'-4,500'	190	1,646'	VersaCem + 10% Bentonite + 0.125 pps Poly-E-Flake + 0.5 pps D-Air	12.67	11.9	2.23
Tail: 4,500'-5,000'	100	500	Halcem "C" Neat	6.34	14.8	1.33

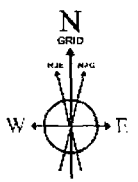
WTD - West Texas Division

Location: Eddy County, NM
Field: Big Eddy Unit
Facility: Drilling Island 4

Slot: Slot 1 (No.271H)
Well: No.271H
Wellbore: No.271H PWB

BOPCO, L.P.



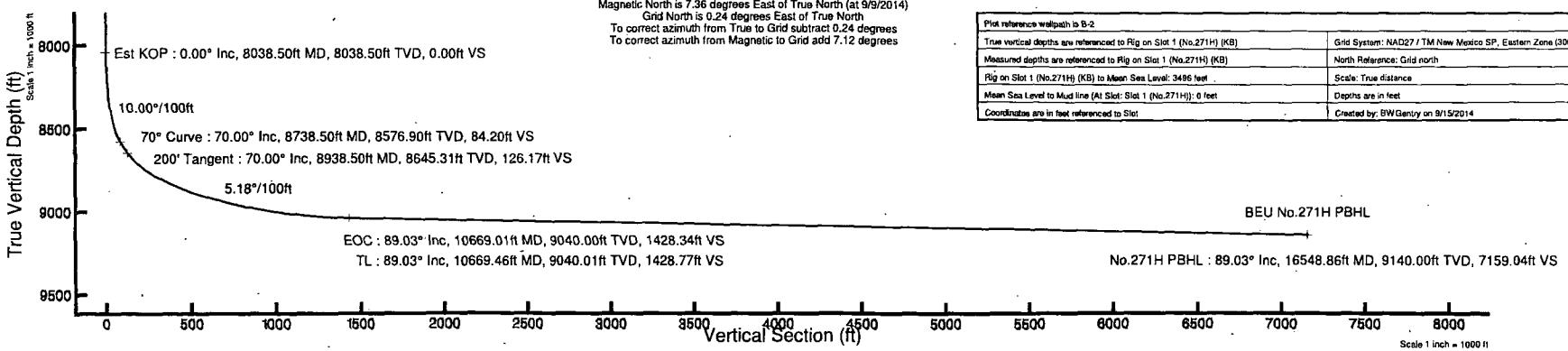


IGRF-11 (1900.0 thru 2014.0) Dip: 60.41° Field: 48489.5 nT
Magnetic North is 7.36 degrees East of True North (at 9/9/2014)
Grid North is 0.24 degrees East of True North
To correct azimuth from True to Grid subtract 0.24 degrees
To correct azimuth from Magnetic to Grid add 7.12 degrees

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	180.000	26.00	0.00	0.00	0.00	0.00
Est KOP	8038.50	0.000	180.000	8038.50	0.00	0.00	0.00	0.00
70° Curve	8738.50	70.000	180.000	8576.90	-376.99	0.00	10.00	84.20
200' Tangent	8938.50	70.000	180.000	8645.31	-564.93	0.00	0.00	126.17
EOC	10669.01	89.026	90.000	9040.00	-1598.00	1099.20	5.18	1428.34
TL	10669.46	89.026	90.009	9040.01	-1598.00	1099.65	2.00	1428.77
No.271H PBHL	16548.86	89.026	90.009	9140.00	-1598.91	6978.20	0.00	7159.04

Plot reference wellpath is B-2	
True vertical depths are referenced to Rig on Slot 1 (No.271H) (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on Slot 1 (No.271H) (KB)	North Reference: Grid north
Rig on Slot 1 (No.271H) (KB) to Mean Sea Level: 3486 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot 1 (No.271H)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: BWGentry on 9/15/2014



Azimuth 102.91° with reference 0.00 N, 0.00 E

Planned Wellpath Report

B-2

BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WTD - West Texas Division**	Slot	**Slot 1 (No.271H)**
Area	**Eddy County, NM**	Well	**No.271H**
Field	**Big Eddy Unit**	Wellbore	**No.271H PWB**
Facility	**Drilling Island 4**		

REPORT SETUP INFORMATION			
Projection System	**NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 4.0.1**
North Reference	**Grid**	User	**BWGentry**
Scale	**0.999931**	Report Generated	**9/15/2014 at 2:27:13 PM**
Convergence at slot	**0.24° East**	Database/Source file	**WellArchitectDB/No.271H_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	343.02	135.51	**636782.90**	**585370.70**	32°36'30.611"N	103°53'20.882"W
Facility Reference Pt			**636647.40**	**585027.70**	32°36'27.223"N	103°53'22.483"W
Field Reference Pt			**640125.10**	**530502.80**	32°27'27.522"N	103°52'44.545"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on Slot 1 (No.271H) (KB) to Facility Vertical Datum	**3496.00ft**
Horizontal Reference Pt	**Slot**	Rig on Slot 1 (No.271H) (KB) to Mean Sea Level	**3496.00ft**
Vertical Reference Pt	**Rig on Slot 1 (No.271H) (KB)**	Rig on Slot 1 (No.271H) (KB) to Mud Line at Slot (Slot 1 (No.271H))	**3496.00ft**
MD Reference Pt	**Rig on Slot 1 (No.271H) (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**102.91°**

Planned Wellpath Report

B-2

BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WTD - West Texas Division**	Slot	**Slot 1 (No.271H)**
Area	**Eddy County, NM**	Well	**No.271H**
Field	**Big Eddy Unit**	Wellbore	**No.271H PWB**
Facility	**Drilling Island 4**		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	180.000	0.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
26.00	0.000	180.000	26.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	Tie On
126.00†	0.000	180.000	126.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
226.00†	0.000	180.000	226.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
326.00†	0.000	180.000	326.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
426.00†	0.000	180.000	426.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
526.00†	0.000	180.000	526.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
583.00†	0.000	180.000	583.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	Top Rustler Anhydrite
626.00†	0.000	180.000	626.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
726.00†	0.000	180.000	726.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
826.00†	0.000	180.000	826.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
846.00†	0.000	180.000	846.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	Top Salt
926.00†	0.000	180.000	926.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1026.00†	0.000	180.000	1026.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1126.00†	0.000	180.000	1126.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1226.00†	0.000	180.000	1226.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1326.00†	0.000	180.000	1326.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1426.00†	0.000	180.000	1426.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1526.00†	0.000	180.000	1526.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1626.00†	0.000	180.000	1626.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1726.00†	0.000	180.000	1726.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1826.00†	0.000	180.000	1826.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
1926.00†	0.000	180.000	1926.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2026.00†	0.000	180.000	2026.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2126.00†	0.000	180.000	2126.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2226.00†	0.000	180.000	2226.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2325.00†	0.000	180.000	2325.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	Base Salt
2326.00†	0.000	180.000	2326.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2426.00†	0.000	180.000	2426.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2526.00†	0.000	180.000	2526.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2626.00†	0.000	180.000	2626.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2726.00†	0.000	180.000	2726.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2826.00†	0.000	180.000	2826.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
2894.00†	0.000	180.000	2894.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	Top of Reef
2926.00†	0.000	180.000	2926.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3026.00†	0.000	180.000	3026.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3126.00†	0.000	180.000	3126.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3226.00†	0.000	180.000	3226.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3326.00†	0.000	180.000	3326.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3426.00†	0.000	180.000	3426.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3526.00†	0.000	180.000	3526.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3626.00†	0.000	180.000	3626.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3726.00†	0.000	180.000	3726.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3826.00†	0.000	180.000	3826.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
3926.00†	0.000	180.000	3926.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	

Planned Wellpath Report

B-2

BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 1 (No.271H)
Area	Eddy County, NM	Well	No.271H
Field	Big Eddy Unit	Wellbore	No.271H PWB
Facility	Drilling Island 4		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4026.00†	0.000	180.000	4026.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4084.00†	0.000	180.000	4084.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	Top Del. Mtn. Grp
4126.00†	0.000	180.000	4126.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4226.00†	0.000	180.000	4226.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4326.00†	0.000	180.000	4326.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4426.00†	0.000	180.000	4426.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4526.00†	0.000	180.000	4526.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4626.00†	0.000	180.000	4626.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4726.00†	0.000	180.000	4726.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4826.00†	0.000	180.000	4826.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
4926.00†	0.000	180.000	4926.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5026.00†	0.000	180.000	5026.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5126.00†	0.000	180.000	5126.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5226.00†	0.000	180.000	5226.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5326.00†	0.000	180.000	5326.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5426.00†	0.000	180.000	5426.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5526.00†	0.000	180.000	5526.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5626.00†	0.000	180.000	5626.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5726.00†	0.000	180.000	5726.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5826.00†	0.000	180.000	5826.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
5926.00†	0.000	180.000	5926.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6026.00†	0.000	180.000	6026.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6126.00†	0.000	180.000	6126.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6226.00†	0.000	180.000	6226.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6326.00†	0.000	180.000	6326.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6426.00†	0.000	180.000	6426.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6526.00†	0.000	180.000	6526.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6626.00†	0.000	180.000	6626.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6726.00†	0.000	180.000	6726.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6826.00†	0.000	180.000	6826.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
6894.00†	0.000	180.000	6894.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	Top Bone Spring Lime
6926.00†	0.000	180.000	6926.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7026.00†	0.000	180.000	7026.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7126.00†	0.000	180.000	7126.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7226.00†	0.000	180.000	7226.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7326.00†	0.000	180.000	7326.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7426.00†	0.000	180.000	7426.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7526.00†	0.000	180.000	7526.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7626.00†	0.000	180.000	7626.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7726.00†	0.000	180.000	7726.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7826.00†	0.000	180.000	7826.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
7926.00†	0.000	180.000	7926.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
8026.00†	0.000	180.000	8026.00	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	
8038.50	0.000	180.000	8038.50	0.00	0.00	0.00	636782.90	585370.70	32°36'30.611"N	103°53'20.882"W	0.00	Est KOP
8126.00†	8.750	180.000	8125.66	1.49	-6.67	0.00	636782.90	585364.03	32°36'30.545"N	103°53'20.883"W	10.00	

Planned Wellpath Report

B-2

BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 1 (No.271H)
Area	Eddy County, NM	Well	No.271H
Field	Big Eddy Unit	Wellbore	No.271H PWB
Facility	Drilling Island 4		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8144.61†	10.611	180.000	8144.00	2.19	-9.80	0.00	636782.90	585360.90	32°36'30.514"N	103°53'20.883"W	10.00	1st Bone Spring Sand
8226.00†	18.750	180.000	8222.67	6.79	-30.41	0.00	636782.90	585340.30	32°36'30.310"N	103°53'20.884"W	10.00	
8326.00†	28.750	180.000	8314.09	15.77	-70.63	0.00	636782.90	585300.07	32°36'29.912"N	103°53'20.886"W	10.00	
8426.00†	38.750	180.000	8397.13	28.17	-126.12	0.00	636782.90	585244.59	32°36'29.363"N	103°53'20.888"W	10.00	
8526.00†	48.750	180.000	8469.27	43.59	-195.18	0.00	636782.90	585175.53	32°36'28.680"N	103°53'20.892"W	10.00	
8626.00†	58.750	180.000	8528.33	61.58	-275.72	0.00	636782.90	585095.00	32°36'27.883"N	103°53'20.896"W	10.00	
8726.00†	68.750	180.000	8572.50	81.59	-365.30	0.00	636782.90	585005.43	32°36'26.997"N	103°53'20.900"W	10.00	
8738.50	70.000	180.000	8576.90	84.20	-376.99	0.00	636782.90	584993.73	32°36'26.881"N	103°53'20.901"W	10.00	70° Curve
8826.00†	70.000	180.000	8606.83	102.56	-459.22	0.00	636782.90	584911.52	32°36'26.067"N	103°53'20.905"W	0.00	
8926.00†	70.000	180.000	8641.03	123.55	-553.19	0.00	636782.90	584817.55	32°36'25.138"N	103°53'20.909"W	0.00	
8938.50	70.000	180.000	8645.31	126.17	-564.93	0.00	636782.90	584805.81	32°36'25.021"N	103°53'20.910"W	0.00	200' Tangent
9026.00†	69.993	175.175	8675.26	147.89	-647.05	3.46	636786.36	584723.69	32°36'24.209"N	103°53'20.873"W	5.18	
9126.00†	70.145	169.665	8709.37	180.77	-740.20	15.86	636798.76	584630.56	32°36'23.287"N	103°53'20.733"W	5.18	
9226.00†	70.465	164.172	8743.09	222.01	-831.86	37.16	636820.06	584538.90	32°36'22.379"N	103°53'20.489"W	5.18	
9326.00†	70.950	158.706	8776.15	271.26	-921.29	67.20	636850.09	584449.48	32°36'21.493"N	103°53'20.142"W	5.18	
9426.00†	71.596	153.277	8808.28	328.12	-1007.76	105.72	636888.61	584363.01	32°36'20.635"N	103°53'19.696"W	5.18	
9526.00†	72.394	147.894	8839.21	392.13	-1090.56	152.41	636935.30	584280.22	32°36'19.814"N	103°53'19.154"W	5.18	
9626.00†	73.336	142.562	8868.69	462.76	-1169.02	206.90	636989.78	584201.77	32°36'19.036"N	103°53'18.521"W	5.18	
9726.00†	74.413	137.286	8896.49	539.44	-1242.49	268.73	637051.61	584128.30	32°36'18.306"N	103°53'17.802"W	5.18	
9826.00†	75.615	132.068	8922.36	621.54	-1310.37	337.40	637120.28	584060.42	32°36'17.632"N	103°53'17.002"W	5.18	
9926.00†	76.929	126.908	8946.11	708.38	-1372.11	412.35	637195.22	583998.69	32°36'17.018"N	103°53'16.129"W	5.18	
9961.56†	77.422	125.087	8954.00	740.27	-1392.49	440.40	637223.27	583978.31	32°36'16.815"N	103°53'15.802"W	5.18	2nd Bone Spring A Sar
10026.00†	78.345	121.805	8967.53	799.27	-1427.20	492.96	637275.83	583943.60	32°36'16.469"N	103°53'15.190"W	5.18	
10126.00†	79.850	116.756	8986.46	893.45	-1475.20	578.59	637361.45	583895.60	32°36'15.991"N	103°53'14.191"W	5.18	
10226.00†	81.431	111.754	9002.73	990.15	-1515.71	668.52	637451.37	583855.10	32°36'15.586"N	103°53'13.142"W	5.18	
10326.00†	83.075	106.795	9016.22	1088.59	-1548.40	762.02	637544.86	583822.41	32°36'15.259"N	103°53'12.050"W	5.18	
10358.67†	83.625	105.183	9020.00	1121.00	-1557.34	793.21	637576.06	583813.47	32°36'15.169"N	103°53'11.686"W	5.18	2nd Bone Spring B San
10426.00†	84.771	101.871	9026.81	1187.97	-1573.00	858.33	637641.17	583797.81	32°36'15.011"N	103°53'10.926"W	5.18	
10526.00†	86.505	96.974	9034.42	1287.46	-1589.32	956.66	637739.49	583781.50	32°36'14.846"N	103°53'09.777"W	5.18	
10626.00†	88.265	92.095	9038.98	1386.26	-1597.21	1056.21	637839.04	583773.60	32°36'14.763"N	103°53'08.614"W	5.18	
10669.01	89.026	90.000	9040.00	1428.34	-1598.00	1099.20	637882.02	583772.82	32°36'14.754"N	103°53'08.111"W	5.18	EOC
10669.46	89.026	90.009	9040.01	1428.77	-1598.00	1099.65	637882.47	583772.82	32°36'14.754"N	103°53'08.106"W	2.00	TL
10726.00†	89.026	90.009	9040.97	1483.88	-1598.00	1156.18	637939.00	583772.81	32°36'14.751"N	103°53'07.445"W	0.00	
10826.00†	89.026	90.009	9042.67	1581.34	-1598.02	1256.17	638038.98	583772.79	32°36'14.747"N	103°53'06.277"W	0.00	
10926.00†	89.026	90.009	9044.37	1678.80	-1598.04	1356.15	638138.95	583772.78	32°36'14.743"N	103°53'05.108"W	0.00	
11026.00†	89.026	90.009	9046.07	1776.27	-1598.05	1456.14	638238.93	583772.76	32°36'14.738"N	103°53'03.939"W	0.00	
11126.00†	89.026	90.009	9047.77	1873.73	-1598.07	1556.12	638338.91	583772.75	32°36'14.734"N	103°53'02.770"W	0.00	
11226.00†	89.026	90.009	9049.47	1971.19	-1598.08	1656.11	638438.89	583772.73	32°36'14.730"N	103°53'01.602"W	0.00	
11326.00†	89.026	90.009	9051.17	2068.66	-1598.10	1756.09	638538.87	583772.72	32°36'14.725"N	103°53'00.433"W	0.00	
11426.00†	89.026	90.009	9052.87	2166.12	-1598.11	1856.08	638638.85	583772.70	32°36'14.721"N	103°52'59.264"W	0.00	
11526.00†	89.026	90.009	9054.57	2263.58	-1598.13	1956.06	638738.83	583772.68	32°36'14.717"N	103°52'58.095"W	0.00	
11626.00†	89.026	90.009	9056.28	2361.05	-1598.15	2056.05	638838.80	583772.67	32°36'14.712"N	103°52'56.927"W	0.00	
11726.00†	89.026	90.009	9057.98	2458.51	-1598.16	2156.04	638938.78	583772.65	32°36'14.708"N	103°52'55.758"W	0.00	
11826.00†	89.026	90.009	9059.68	2555.97	-1598.18	2256.02	639038.76	583772.64	32°36'14.704"N	103°52'54.589"W	0.00	
11926.00†	89.026	90.009	9061.38	2653.44	-1598.19	2356.01	639138.74	583772.62	32°36'14.699"N	103°52'53.420"W	0.00	

Planned Wellpath Report

B-2

BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	Slot 1 (No.271H)
Area	Eddy County, NM	Well	No.271H
Field	Big Eddy Unit	Wellbore	No.271H PWB
Facility	Drilling Island 4		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12026.00†	89.026	90.009	9063.08	2750.90	-1598.21	2455.99	639238.72	583772.61	32°36'14.695"N	103°52'52.252"W	0.00	
12126.00†	89.026	90.009	9064.78	2848.37	-1598.22	2555.98	639338.70	583772.59	32°36'14.691"N	103°52'51.083"W	0.00	
12226.00†	89.026	90.009	9066.48	2945.83	-1598.24	2655.96	639438.67	583772.58	32°36'14.686"N	103°52'49.914"W	0.00	
12326.00†	89.026	90.009	9068.18	3043.29	-1598.25	2755.95	639538.65	583772.56	32°36'14.682"N	103°52'48.745"W	0.00	
12426.00†	89.026	90.009	9069.88	3140.76	-1598.27	2855.93	639638.63	583772.54	32°36'14.678"N	103°52'47.577"W	0.00	
12526.00†	89.026	90.009	9071.58	3238.22	-1598.29	2955.92	639738.61	583772.53	32°36'14.673"N	103°52'46.408"W	0.00	
12626.00†	89.026	90.009	9073.28	3335.68	-1598.30	3055.91	639838.59	583772.51	32°36'14.669"N	103°52'45.239"W	0.00	
12726.00†	89.026	90.009	9074.98	3433.15	-1598.32	3155.89	639938.57	583772.50	32°36'14.664"N	103°52'44.070"W	0.00	
12826.00†	89.026	90.009	9076.68	3530.61	-1598.33	3255.88	640038.54	583772.48	32°36'14.660"N	103°52'42.902"W	0.00	
12926.00†	89.026	90.009	9078.39	3628.07	-1598.35	3355.86	640138.52	583772.47	32°36'14.656"N	103°52'41.733"W	0.00	
13026.00†	89.026	90.009	9080.09	3725.54	-1598.36	3455.85	640238.50	583772.45	32°36'14.651"N	103°52'40.564"W	0.00	
13126.00†	89.026	90.009	9081.79	3823.00	-1598.38	3555.83	640338.48	583772.43	32°36'14.647"N	103°52'39.395"W	0.00	
13226.00†	89.026	90.009	9083.49	3920.46	-1598.40	3655.82	640438.46	583772.42	32°36'14.642"N	103°52'38.227"W	0.00	
13326.00†	89.026	90.009	9085.19	4017.93	-1598.41	3755.80	640538.44	583772.40	32°36'14.638"N	103°52'37.058"W	0.00	
13426.00†	89.026	90.009	9086.89	4115.39	-1598.43	3855.79	640638.41	583772.39	32°36'14.634"N	103°52'35.889"W	0.00	
13526.00†	89.026	90.009	9088.59	4212.85	-1598.44	3955.78	640738.39	583772.37	32°36'14.629"N	103°52'34.720"W	0.00	
13626.00†	89.026	90.009	9090.29	4310.32	-1598.46	4055.76	640838.37	583772.36	32°36'14.625"N	103°52'33.552"W	0.00	
13726.00†	89.026	90.009	9091.99	4407.78	-1598.47	4155.75	640938.35	583772.34	32°36'14.620"N	103°52'32.383"W	0.00	
13826.00†	89.026	90.009	9093.69	4505.24	-1598.49	4255.73	641038.33	583772.33	32°36'14.616"N	103°52'31.214"W	0.00	
13926.00†	89.026	90.009	9095.39	4602.71	-1598.50	4355.72	641138.31	583772.31	32°36'14.612"N	103°52'30.045"W	0.00	
14026.00†	89.026	90.009	9097.09	4700.17	-1598.52	4455.70	641238.28	583772.29	32°36'14.607"N	103°52'28.877"W	0.00	
14126.00†	89.026	90.009	9098.79	4797.63	-1598.54	4555.69	641338.26	583772.28	32°36'14.603"N	103°52'27.708"W	0.00	
14226.00†	89.026	90.009	9100.49	4895.10	-1598.55	4655.67	641438.24	583772.26	32°36'14.598"N	103°52'26.539"W	0.00	
14326.00†	89.026	90.009	9102.20	4992.56	-1598.57	4755.66	641538.22	583772.25	32°36'14.594"N	103°52'25.370"W	0.00	
14426.00†	89.026	90.009	9103.90	5090.02	-1598.58	4855.65	641638.20	583772.23	32°36'14.589"N	103°52'24.202"W	0.00	
14526.00†	89.026	90.009	9105.60	5187.49	-1598.60	4955.63	641738.18	583772.22	32°36'14.585"N	103°52'23.033"W	0.00	
14626.00†	89.026	90.009	9107.30	5284.95	-1598.61	5055.62	641838.16	583772.20	32°36'14.581"N	103°52'21.864"W	0.00	
14726.00†	89.026	90.009	9109.00	5382.41	-1598.63	5155.60	641938.13	583772.18	32°36'14.576"N	103°52'20.696"W	0.00	
14826.00†	89.026	90.009	9110.70	5479.88	-1598.65	5255.59	642038.11	583772.17	32°36'14.572"N	103°52'19.527"W	0.00	
14926.00†	89.026	90.009	9112.40	5577.34	-1598.66	5355.57	642138.09	583772.15	32°36'14.567"N	103°52'18.358"W	0.00	
15026.00†	89.026	90.009	9114.10	5674.80	-1598.68	5455.56	642238.07	583772.14	32°36'14.563"N	103°52'17.189"W	0.00	
15126.00†	89.026	90.009	9115.80	5772.27	-1598.69	5555.54	642338.05	583772.12	32°36'14.558"N	103°52'16.021"W	0.00	
15226.00†	89.026	90.009	9117.50	5869.73	-1598.71	5655.53	642438.03	583772.11	32°36'14.554"N	103°52'14.852"W	0.00	
15326.00†	89.026	90.009	9119.20	5967.19	-1598.72	5755.52	642538.00	583772.09	32°36'14.549"N	103°52'13.683"W	0.00	
15426.00†	89.026	90.009	9120.90	6064.66	-1598.74	5855.50	642637.98	583772.08	32°36'14.545"N	103°52'12.514"W	0.00	
15526.00†	89.026	90.009	9122.60	6162.12	-1598.75	5955.49	642737.96	583772.06	32°36'14.540"N	103°52'11.346"W	0.00	
15626.00†	89.026	90.009	9124.30	6259.58	-1598.77	6055.47	642837.94	583772.04	32°36'14.536"N	103°52'10.177"W	0.00	
15726.00†	89.026	90.009	9126.01	6357.05	-1598.79	6155.46	642937.92	583772.03	32°36'14.532"N	103°52'09.008"W	0.00	
15826.00†	89.026	90.009	9127.71	6454.51	-1598.80	6255.44	643037.90	583772.01	32°36'14.527"N	103°52'07.839"W	0.00	
15926.00†	89.026	90.009	9129.41	6551.97	-1598.82	6355.43	643137.87	583772.00	32°36'14.523"N	103°52'06.671"W	0.00	
16026.00†	89.026	90.009	9131.11	6649.44	-1598.83	6455.41	643237.85	583771.98	32°36'14.518"N	103°52'05.502"W	0.00	
16126.00†	89.026	90.009	9132.81	6746.90	-1598.85	6555.40	643337.83	583771.97	32°36'14.514"N	103°52'04.333"W	0.00	
16226.00†	89.026	90.009	9134.51	6844.36	-1598.86	6655.39	643437.81	583771.95	32°36'14.509"N	103°52'03.164"W	0.00	
16326.00†	89.026	90.009	9136.21	6941.83	-1598.88	6755.37	643537.79	583771.93	32°36'14.505"N	103°52'01.996"W	0.00	
16426.00†	89.026	90.009	9137.91	7039.29	-1598.90	6855.36	643637.77	583771.92	32°36'14.500"N	103°52'00.827"W	0.00	

Planned Wellpath Report

B-2

BOPCO, L.P.

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WTD - West Texas Division**	Slot	**Slot 1 (No.271H)**
Area	**Eddy County, NM**	Well	**No.271H**
Field	**Big Eddy Unit**	Wellbore	**No.271H PWB**
Facility	**Drilling Island 4**		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16526.00†	89.026	90.009	9139.61	7136.75	-1598.91	6955.34	643737.74	583771.90	32°36'14.496"N	103°51'59.658"W	0.00	
16548.86	89.026	90.009	9140.00	7159.04	-1598.91	6978.20	643760.60	583771.90	32°36'14.495"N	103°51'59.391"W	0.00	No.271H PBHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) BEU No.271H PBHL	16548.86	9140.00	-1598.91	6978.20	**643760.60**	**583771.90**	32°36'14.495"N	103°51'59.391"W	point

SURVEY PROGRAM - Ref Wellbore: No.271H PWB Ref Wellpath: B-2

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	500.00	Generic gyro - northseeking (Standard)		No.271H PWB
500.00	16548.86	NaviTrak (Standard)		No.271H PWB

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, L.P.
LEASE NO.:	NMNM-04557
WELL NAME & NO.:	Big Eddy Unit DI4 271H
SURFACE HOLE FOOTAGE:	0358' FNL & 2078' FEL
BOTTOM HOLE FOOTAGE	2000' FNL & 0330' FEL Sec. 04, T. 20 S., R 31 E.
LOCATION:	Section 05, T. 20 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

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

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- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
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- ☒ **Construction**
  - Notification
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  - Well Structures & Facilities
- ☒ **Interim Reclamation**
  - Delayed Interim Reclamation
- ☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

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

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

Hackberry OHV Area Stipulations
Pipelines shall be buried 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. Power poles and associated ground structures (poles, guy wires) will not be placed within 20 feet of recreation trails. Guy wires must be equipped with a sleeve, tape or other industry approved apparatus that is highly visible during the day and reflective at night. Appropriate safety signage will be in place during all phases of the project. Upon completion of construction, the road shall be returned to pre-construction condition with no bumps or dips. All vehicle and equipment operators will observe speed limits and practice responsible defensive driving habits.

Commercial Well Determination
A commercial well determination shall be submitted after production has been established for at least six months.

Unit Wells
The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

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

Due to the size of the drilling island and associated facilities pad, the operator shall not be required to stockpile topsoil. All soil shall be used for leveling of the pads. The operator shall contact the BLM prior to interim and final reclamation to develop a suitable reclamation plan.

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.

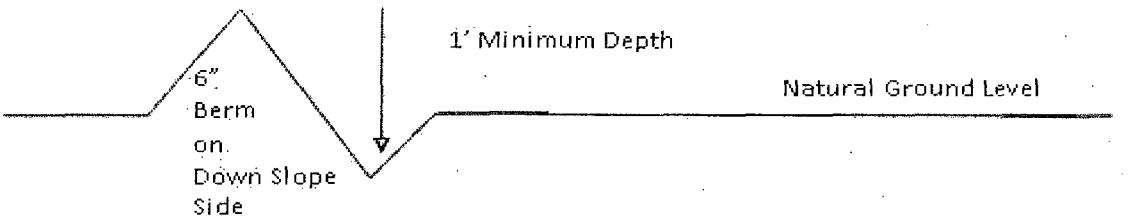
Ditching
Ditching shall be required on both sides of the road.

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

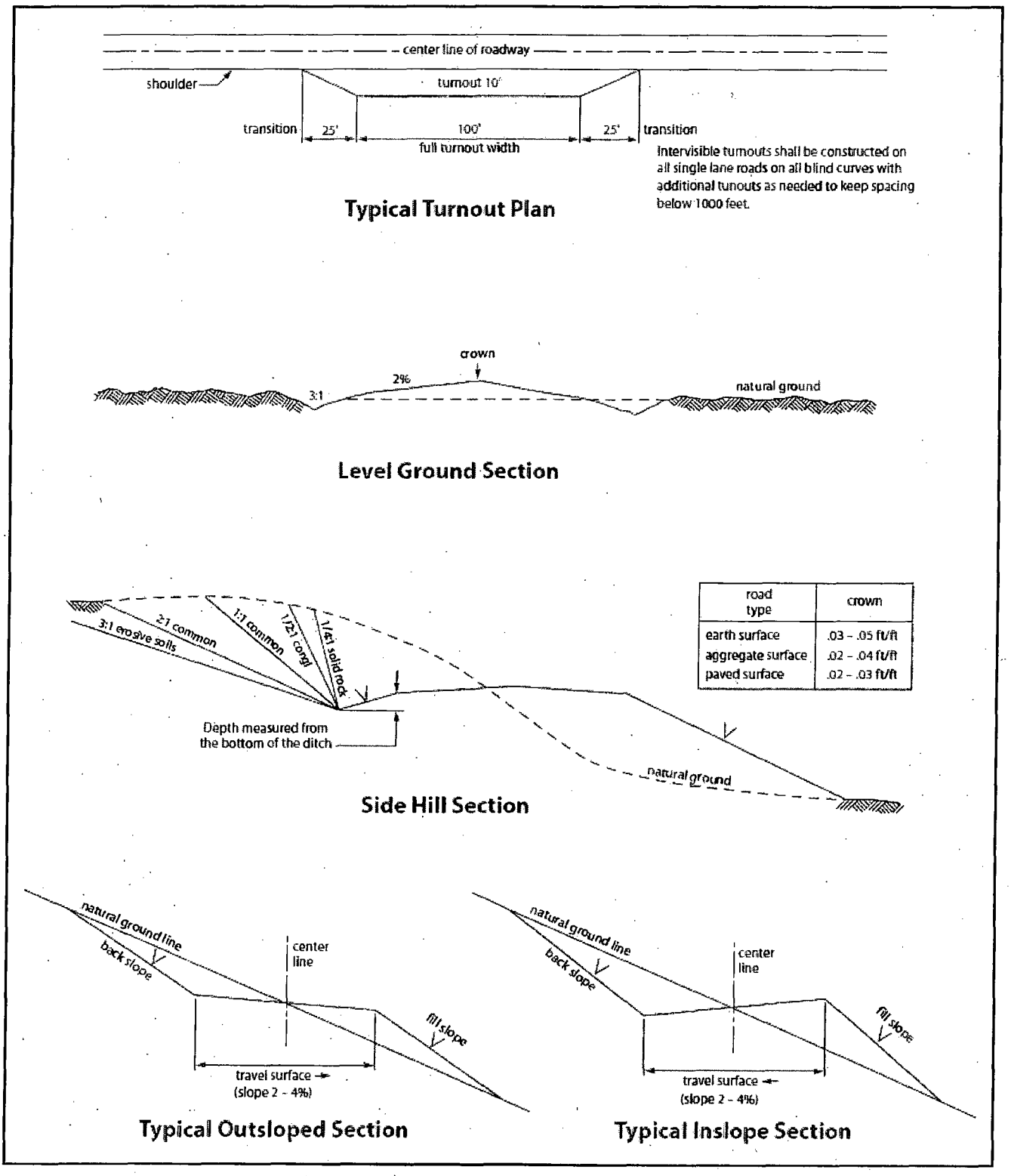


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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. **Operator has state that Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is encountered in quantities greater than 10 PPM the well shall be shut in and H2S equipment shall be installed and flare line must be extended pursuant to Onshore Oil and Gas Order #6. Report measured values and formation to the BLM. After detection, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items.**

2. **Operator shall sufficiently secure the wellbore prior to skidding the rig to the 269H as stated by the operator.**

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

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

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size 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) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. 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.

Capitan Reef
Secretary's Potash
Possibility of water flows in the Artesia Group and Salado.
Possibility of lost circulation in the Red Beds, Artesia Group, Rustler, Capitan Reef, and Delaware.

1. The **16** inch surface casing shall be set at approximately **839** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) 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 **13-3/8** inch 1st intermediate casing, which shall be set at approximately **2700** feet (in the Seven Rivers formation), 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 potash.**

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

Operator has proposed DV tool at depth of 2894', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

☒ 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 potash and Capitan Reef.**

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

4. The minimum required fill of cement behind the **7 x 4-1/2** inch production casing is:

Operator has proposed DV tool at depth of 5000', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve approved top of cement on the next stage.

b. Second stage above DV tool:

☒ Cement should tie-back at least **50 feet above the Capitan Reef** (Top of Capitan Reef estimated at **2804'**). Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

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

C. PRESSURE CONTROL

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

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

3. **A variance is granted for the use of a diverter on the 20" surface casing.**

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** 1st intermediate casing shoe shall be **3000 (3M)** psi.

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

    a. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

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

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

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

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

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

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.

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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 (Not applied for in APD)

C. ELECTRIC LINES (Not applied for in APD)

IX. INTERIM RECLAMATION

Since it is expected that multiple wells will be drilled from this location in the future, no interim reclamation will be required. However, during the life of the development, all disturbed areas not needed for future wells or active support of production operations should undergo 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).

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

Seed Mixture for LPC Sand/Shinnery Sites

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
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

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