Form 3160-3
(March 2012)

AT5-16-38

OCD Artesia

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM113944

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.
Cottonwood 29-32 Federal Com #1H

2. Name of Operator Nearburg Producing Company OGRID #15742

9. API Well No.
30 015 43702

3a. Address 3300 N. A Street, Bldg. 2, Suite 120
Midland, TX 79705

3b. Phone No. *(include area code)*
(432) 686-8235

10. Field and Pool, or Exploratory
~~Wildcat~~; Bone Springs (Oil)
Welch

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 150' FNL and 1120' FWL Sec-29, T-26S, R-26E (P-PT: 330' FNL & 660' FWL S29)
At proposed prod. zone 330' FSL and 660' FWL, Sec-32, T-26S, R-26E

11. Sec., T. R. M. or Blk. and Survey or Area
Sec-29, T-26S, R-26E

14. Distance in miles and direction from nearest town or post office*
12 miles Southeast from Whites City, NM

12. County or Parish
Eddy

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 150'

16. No. of acres in lease
1581.51

17. Spacing Unit dedicated to this well
~~223.05~~ acres
222.97

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 150'

19. Proposed Depth
TVD: 6700' MD: 13,448'

20. BLM/BIA Bond No. on file
NM2163

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3,434' GL

22. Approximate date work will start*
01/01/2016

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 [signature] Name *(Printed/Typed)* Tim Green Date 9-28-15

Title
Production Manager, Nearburg Producing Company

Approved by *(Signature)* /S/ STEPHEN J. CAFFEY Name *(Printed/Typed)* Date 3-28-16

Title FOR FIELD MANAGER Office BLM-CARLSBAD FIELD OFFICE

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

APPROVAL FOR TWO YEARS

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

(Continued on page 2)

*(Instructions on page 2)

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SEE ATTACHED FOR CONDITIONS OF APPROVAL

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 06 2016
RECEIVED

Carlsbad Controlled Water Basin

Witness Surface & Intermediate Casing

Closed loop System

Nearburg Producing Company
Cottonwood 29-32 Federal Com #1H
SHL: 150' FNL & 1120' FWL, Unit D
Sec 29 T-26S R26E
BHL: 330' FSL & 660' FWL, Lot 4
Sec 32 T-26S R-26E
Eddy County, New Mexico

OPERATOR CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Nearburg Producing Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

9-28-15

Tim Green
Production Manager
Nearburg Producing Company – OGRID #15742

Date

Office Phone: (432) 818-2940
Cell Phone: (432) 413-9747
E-mail: tgreen@nearburg.com

EXHIBIT A

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

1226 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 43702	64010	~~WILDCAT~~; BONE SPRINGS (OIL)

Property Code	Property Name	Well Number
316101	COTTONWOOD 29-32 FEDERAL COM	1H

OGRID No.	Operator Name	Elevation
15742	NEARBURG PRODUCING CO.	3434

Surface Location

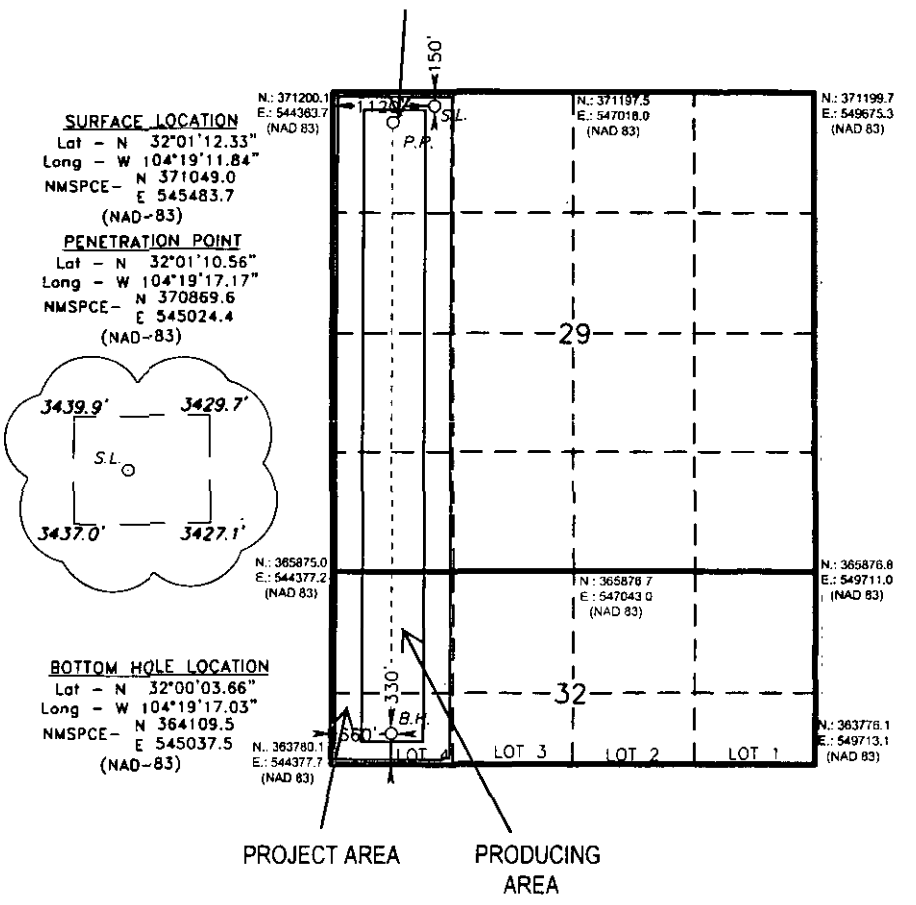
UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/SOUTH LINE	FEET from the	East/West Line	County
D	29	26 S	26 E		150	NORTH	1120	WEST	EDDY

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
LOT 4	32	26 S	26 E		330	SOUTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
~~223.05~~ 222.97			

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



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.

9-28-15
Signature Date

Tim Green
Printed Name

tgreen@nearburg.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.

Date Surveyed

Signature & Seal of Professional Surveyor

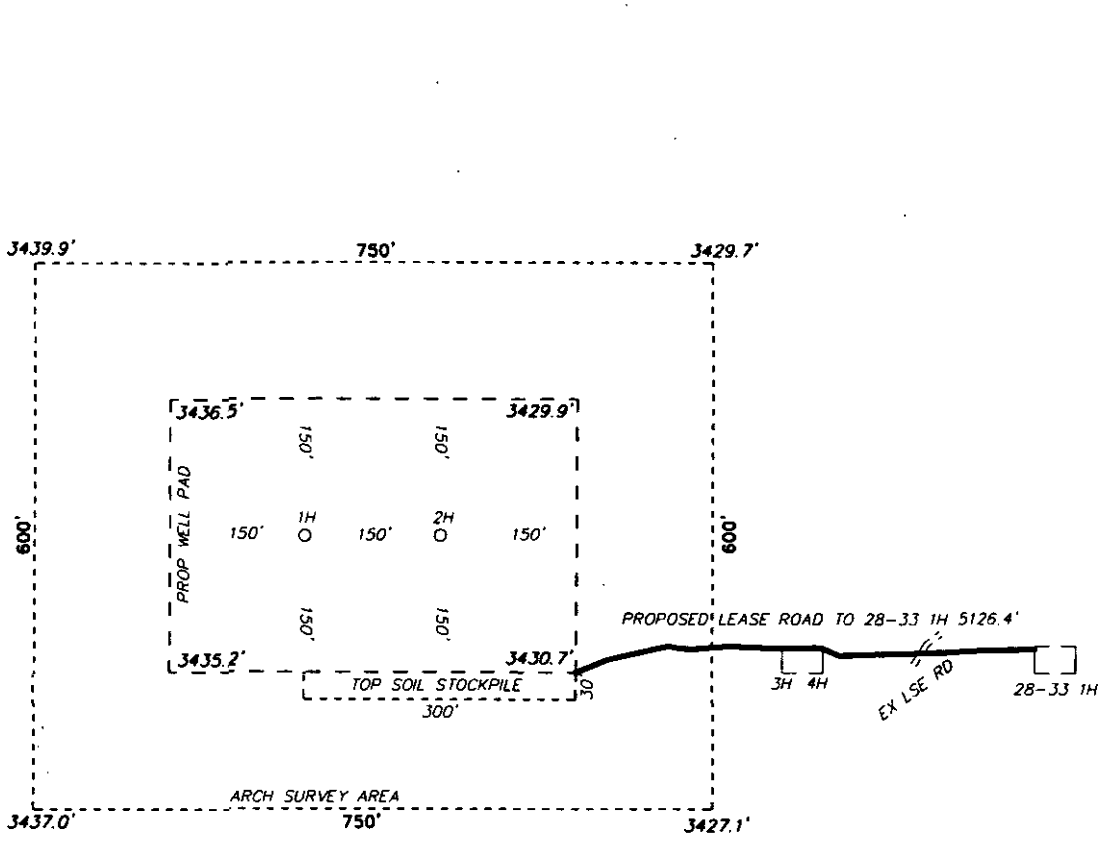
GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number Gary L. Jones 7977

0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'
WO Num.: 31724

EXHIBIT B-1

SECTION 29, TOWNSHIP 26 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



NEARBURG PRODUCING CO.
COTTONWOOD 29-32 FEDERAL COM 2H
ELEV. - 3434'
Lat - N 32°01'12.33"
Long - W 104°19'11.84"
NMSPCE- N 371049.0
E 545483.7
(NAD-83)

WHITE CITY, NM IS ±11 MILES TO THE NORTHWEST OF LOCATION.

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

Directions to Location:

FROM THE INTERSECTION OF GYPSUM & DILLAHUNTY ROAD GO SOUTH ON, ON DILLAHUNTY GO SOUTH 1.2 MILES TO LEASE ROAD, CONTINUE 1.2 MILES SOUTHERLY TO PROPOSED LEASE ROAD.

NEARBURG PRODUCING CO.

REF: COTTONWOOD 29-32 FEDERAL COM 1H / WELL PAD TOPO

THE COTTONWOOD 29-32 FEDERAL COM 1H LOCATED 150' FROM THE NORTH LINE AND 1120' FROM THE WEST LINE OF SECTION 29, TOWNSHIP 26 SOUTH, RANGE 26 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

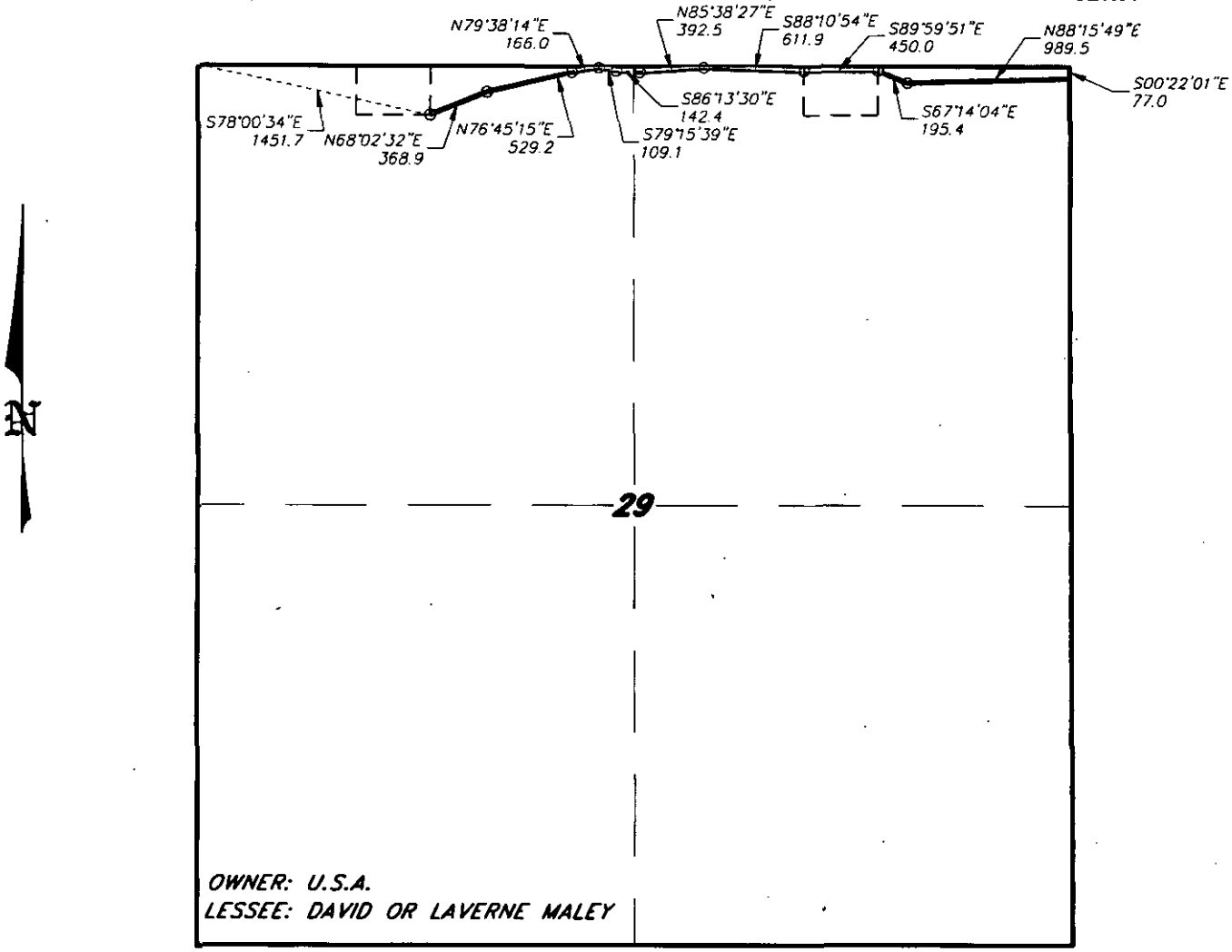
basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: 31724	Drawn By: K. NORRIS	Date: 06-25-2015	Survey Date: 06-10-2015	Sheet 1 of 1 Sheets

EXHIBIT B-3

SECTION 29, TOWNSHIP 26 SOUTH, RANGE 26 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 29, TOWNSHIP 26 SOUTH, RANGE 26 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

SECTION 29 = 3954.9 FEET = 239.69 RODS = 0.75 MILES = 2.72 ACRES

1,000 0 1000 2000 FEET

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, P.S. No. 7977
TEXAS No. 5074

GARY L. JONES — NEW MEXICO — 7977 — REGISTERED PROFESSIONAL LAND SURVEYOR

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focused on excellence in the oilfield

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Hobbs, New Mexico 88241

(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

NEARBURG PRODUCING CO.

REF: PROPOSED LEASE ROAD TO COTTONWOOD WELLS SECTION 29

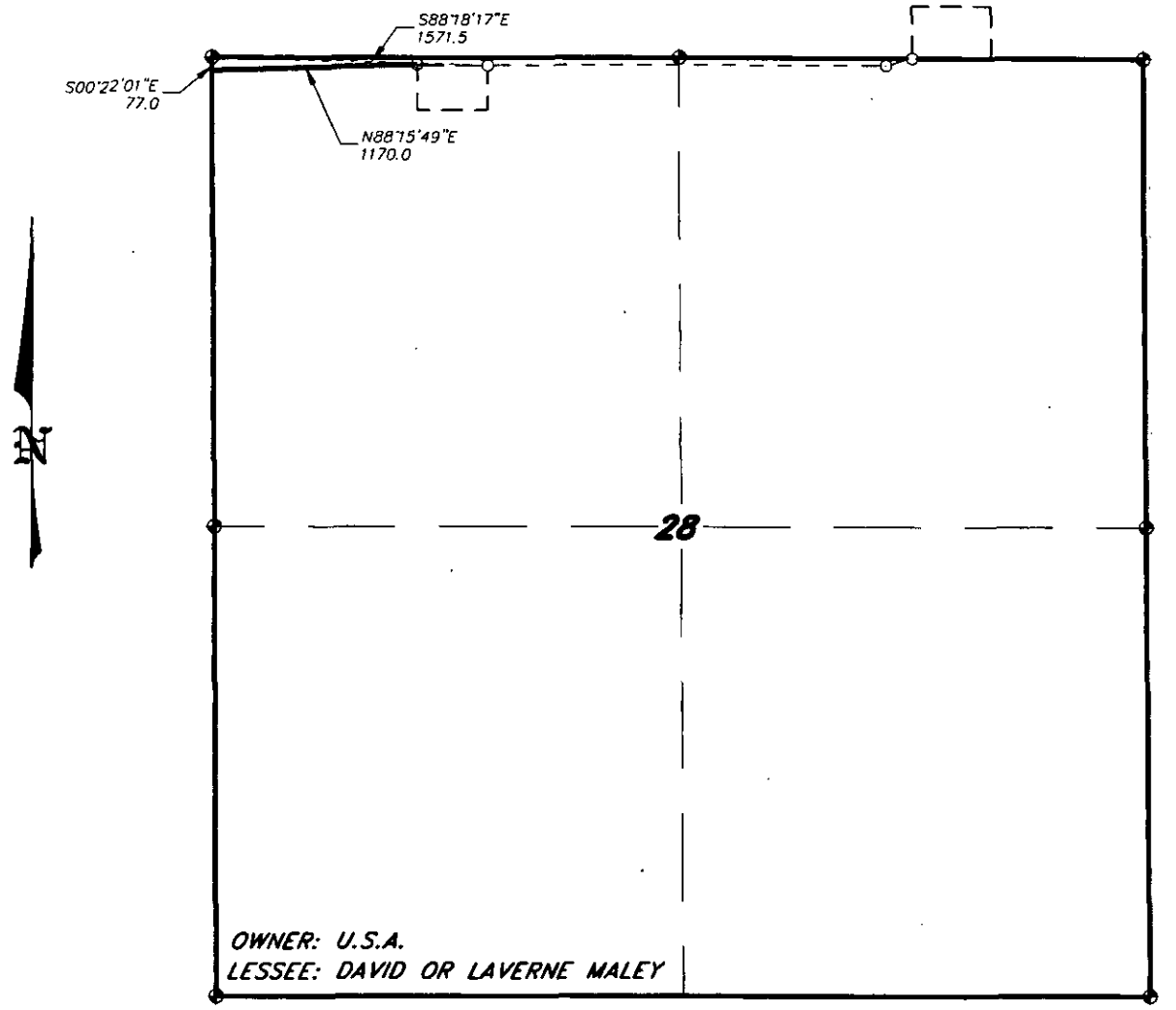
A LEASE ROAD CROSSING USA LAND IN
SECTION 29, TOWNSHIP 26 SOUTH, RANGE 26 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 31741	Drawn By: K. NORRIS	Date: 09-28-2015	Survey Date: 06-11-2015	Sheet 1 of 1 Sheets

EXHIBIT B-4

SECTION 28, TOWNSHIP 26 SOUTH, RANGE 26 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 28, TOWNSHIP 26 SOUTH, RANGE 26 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

SECTION 28 = 1170.0 FEET = 70.91 RODS = 0.22 MILES = 0.81 ACRES

1000 0 1000 2000 FEET

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES — NEW MEXICO — No. 7977
GARY L. JONES — TEXAS — No. 5074

GARY L. JONES — NEW MEXICO — 7977 — REGISTERED PROFESSIONAL LAND SURVEYOR

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basinsurveys.com

NEARBURG PRODUCING CO.

REF: PROPOSED LEASE ROAD TO COTTONWOOD WELLS

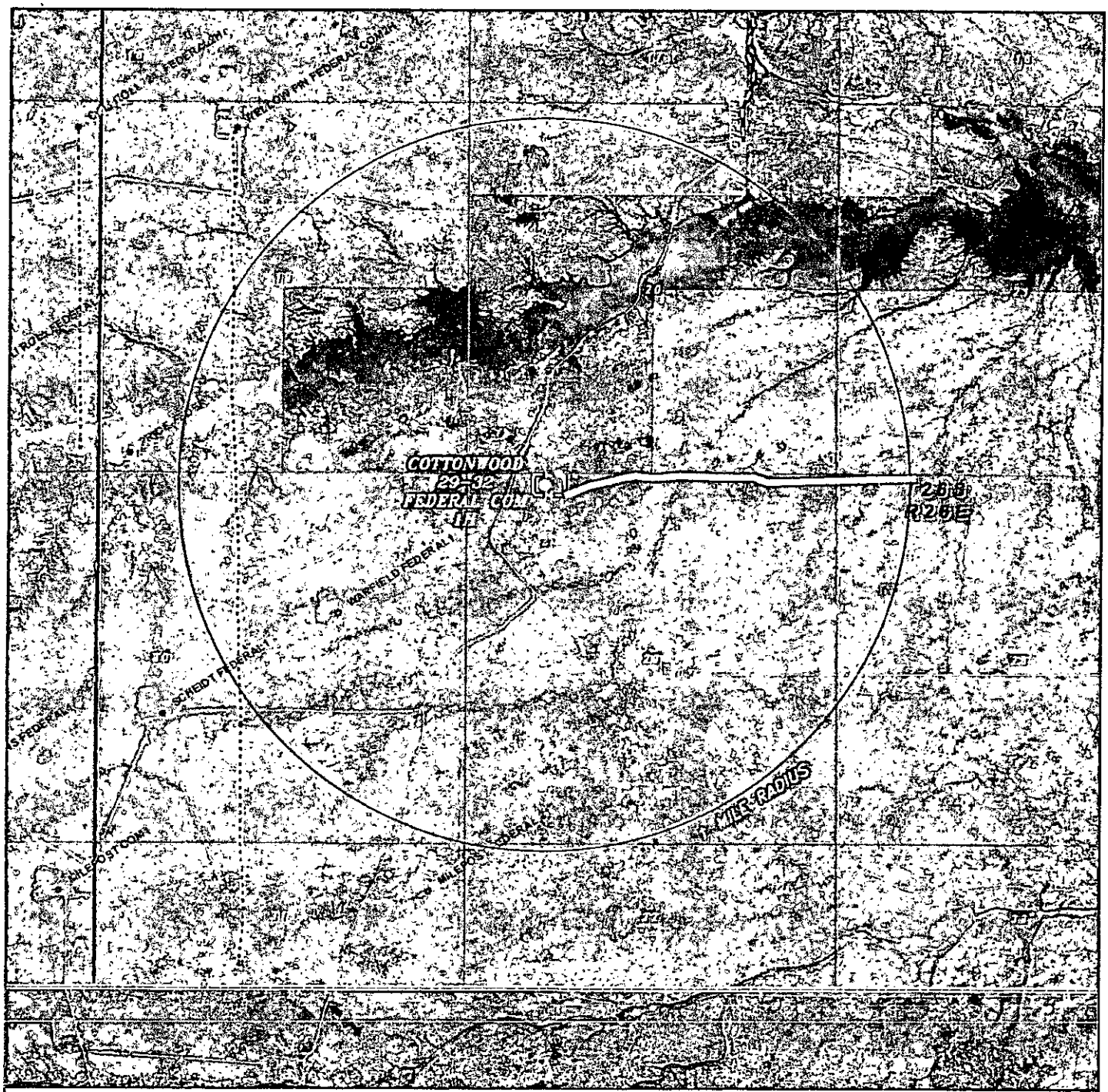
A LEASE ROAD CROSSING USA LAND IN

SECTION 28, TOWNSHIP 26 SOUTH, RANGE 26 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 31741	Drawn By: K. NORRIS	Date: 06-11-2015	Survey Date: 04-15-2015	Sheet 1 of 1 Sheets

EXHIBIT B-2



COTTONWOOD 29-32 FEDERAL COM 1H
Located 150' FNL and 1120' FWL
Section 29, Township 26 South, Range 26 EAST,
N.M.P.M., Eddy County, New Mexico.

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basinsurveys.com

0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'

W.O. Number: KAN 31724

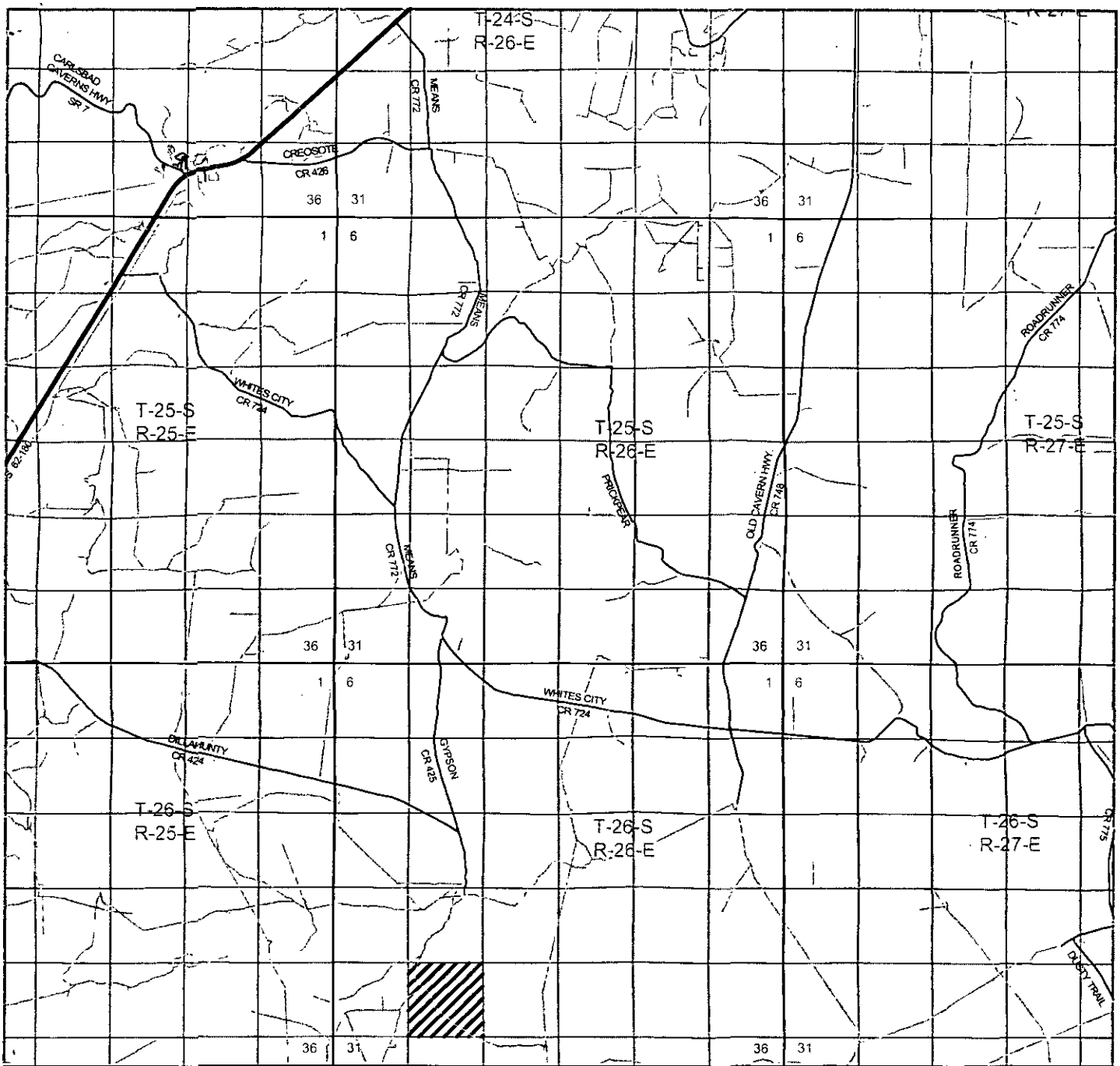
Survey Date: 06-10-2015

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

N

NEARBURG PRODUCING CO.

EXHIBIT C-1



COTTONWOOD 29-32 FEDERAL COM 1H

Located 150' FNL and 1120' FWL

Section 29, Township 26 South, Range 26 EAST,

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

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0 1 MI 2 MI 3 MI 4 MI

SCALE: 1" = 2 MILES

W.O. Number: KAN 31724

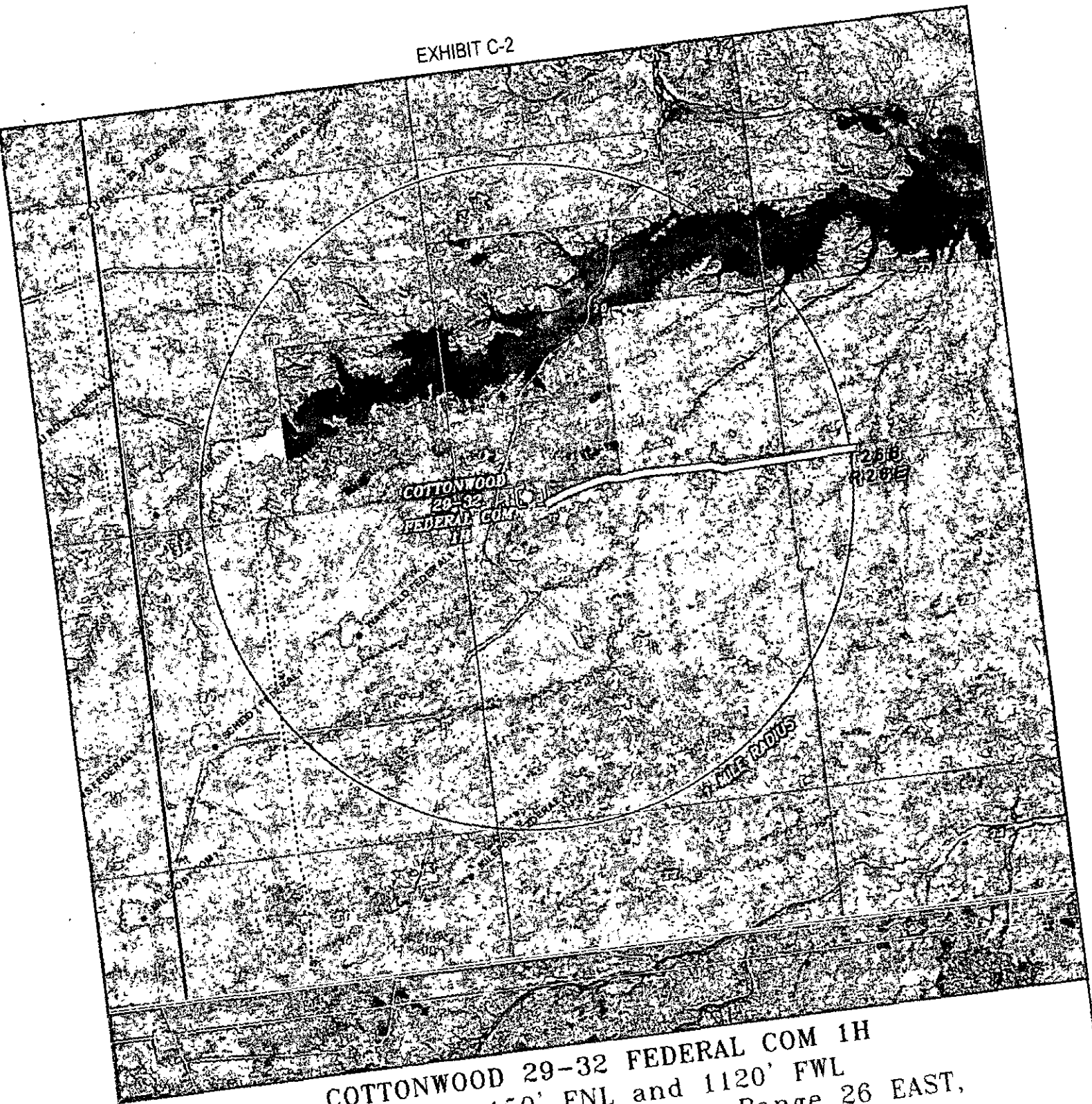
Survey Date: 06-10-2015

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

N

NEARBURG PRODUCING CO.

EXHIBIT C-2



COTTONWOOD 29-32 FEDERAL COM 1H
Located 150' FNL and 1120' FWL
Section 29, Township 26 South, Range 26 EAST,
N.M.P.M., Eddy County, New Mexico.

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0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'

W.O. Number: KAN 31724

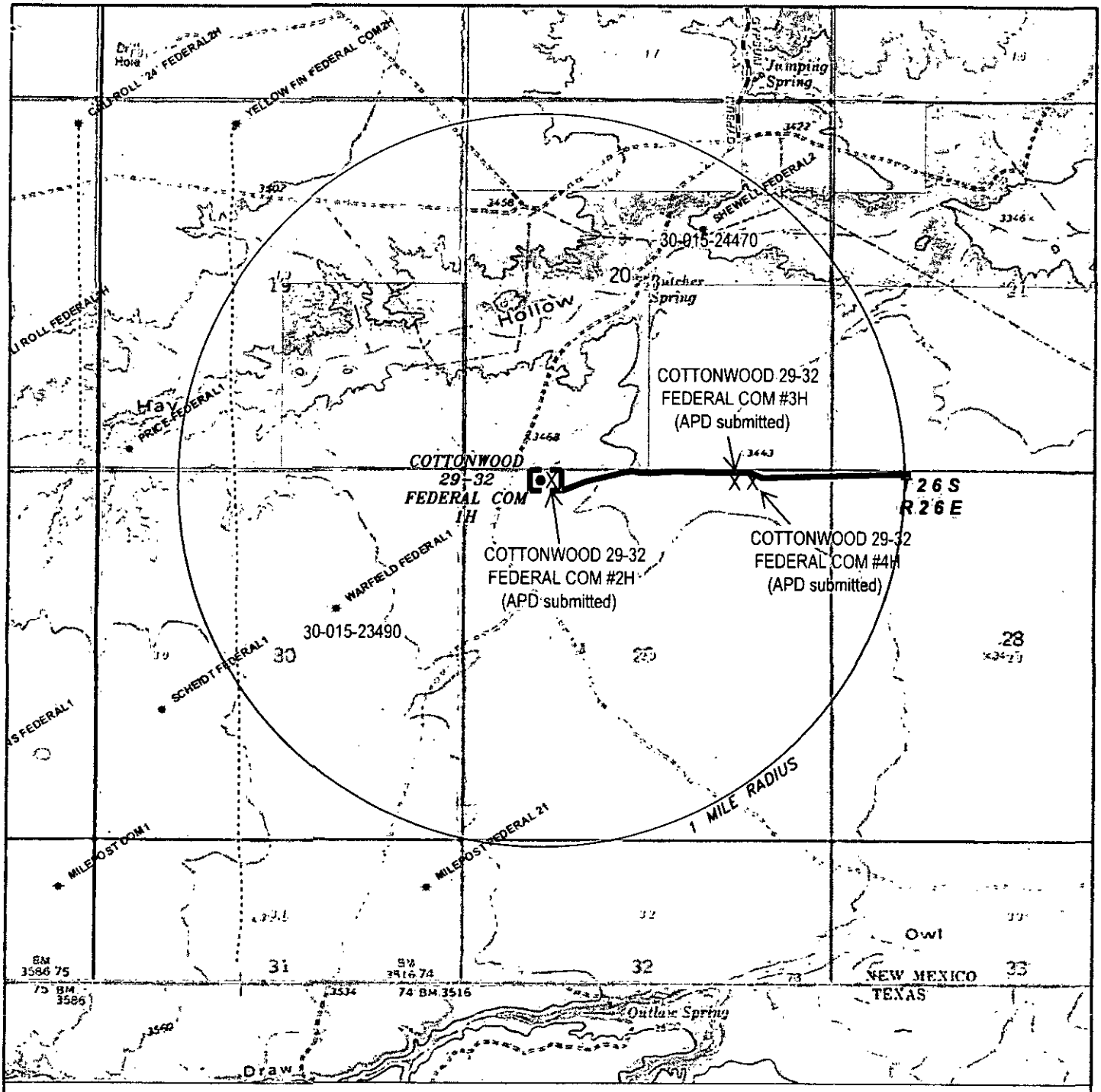
Survey Date: 06-10-2015

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

N

NEARBURG PRODUCING CO.

EXHIBIT D



COTTONWOOD 29-32 FEDERAL COM 1H

Located 150' FNL and 1120' FWL

Section 29, Township 26 South, Range 26 EAST,

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

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0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

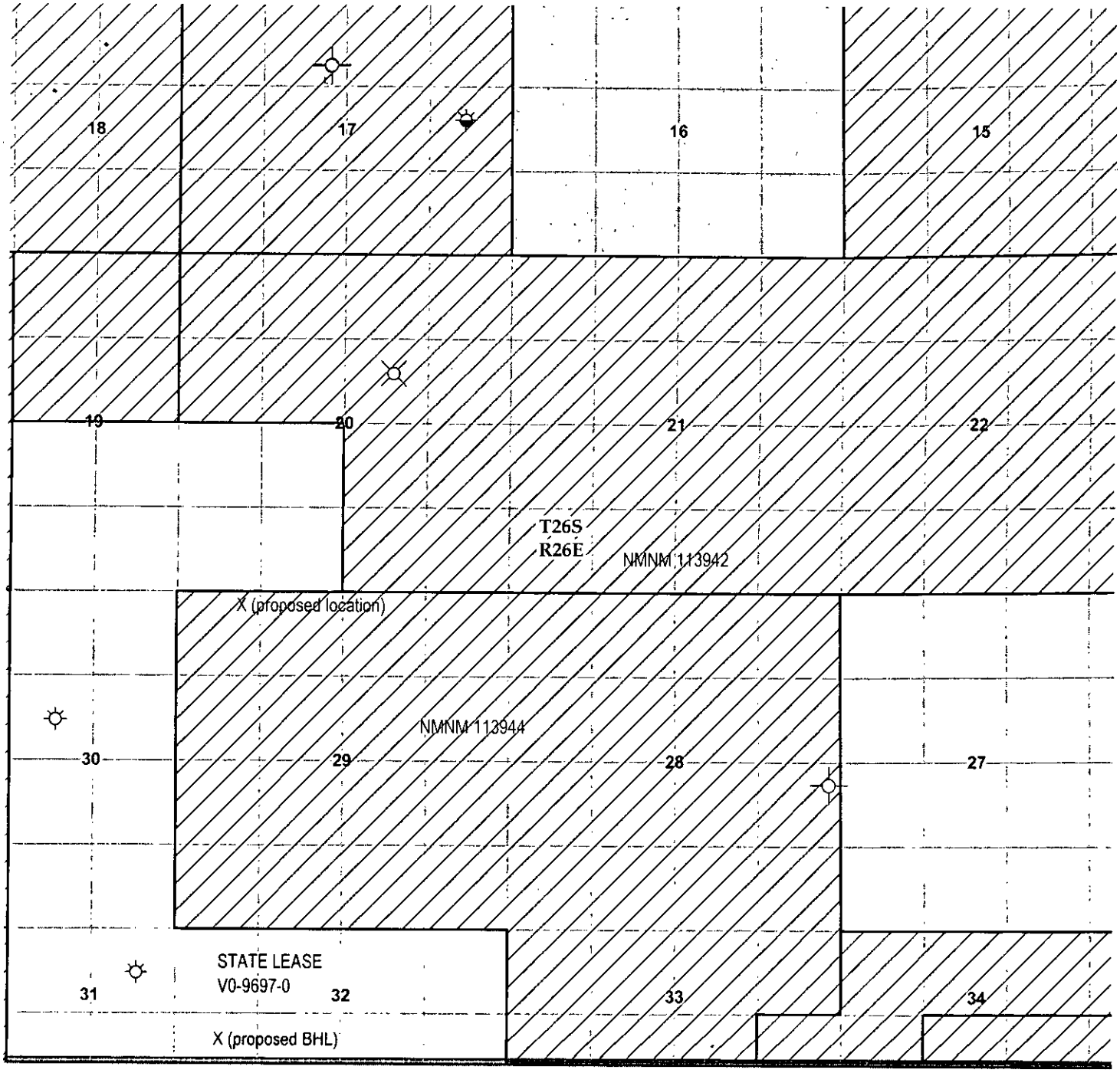
W.O. Number: KAN 31724

Survey Date: 06-10-2015

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

N

NEARBURG PRODUCING CO.



LEASE BOUNDARY MAP
NEARBURG PRODUCING COMPANY
COTTONWOOD 29-32 FEDERAL COM #1H
SHL: 150' FNL & 1120' FWL, Unit D
Sec 29, T-26S, R-26E
BHL: 330' FSL & 660' FWL, Lot 4
Sec 32, T26S, R26E
Eddy County, New Mexico

ATTACHMENT TO FORM 3160-3
Nearburg Producing Company OGRID #15742
COTTONWOOD 29-32 FEDERAL COM #1H

1. Geologic Formations

TVD of target	6,700'	Pilot hole depth	N/A
MD at TD:	13,448'	Deepest expected fresh water:	approx. 50'

Formation	Depth (TVD) from KB	SS	Water/ Mineral Bearing/ Target Zone?	Hazards*
Alluvium	0	3,434	Sand/Gravel	
Fresh Water	50	3,384	Sand/Gravel	
Ochoan/Permian	213	3,221	Anhydrite/Dolomite	
Rustler			Not Present	
Top of Salt	913	2,521	Salt	
Del Mt Gp (Lamar Ls)	1,534	1,900	Lime	
Ramsey Sd	1,584	1,850	Sand	
Cherry Canyon	2,334	1,100	Sand/Shale	
Brushy Canyon	3,434	0	Sand/Shale	
Basal Brushy Canyon	4,559	-1,125	Sand/Shale	
Bone Spring Lime	5,034	-1,600	Lime/Shale	
1 BS Sand	5,894	-2,460	Sand/Shale	
2 BS Sand	tbd	-2,960	Sand/Shale – O/G/W	
Lateral TVD	tbd	-3,266	Sand/Shale – O/G/W	Assume 6700' TVD for lat
TD MD	tbd			

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg Size	Wt. (lbs)	Grade	Conn?	SF Collapse	SF Burst	SF Tension
17.5"	0	420'	13.375"	54.5	J55	STC	1.43/ 5.14 Actual	1.26/ 3.70 Actual	2.59/ 22.45 Actual
12.25"	0	~~1,700'~~ 1,600	9.625"	36	J55	LTC	1.19 2.28 Actual	1.89/ 2.55 Actual	2.1 7.40 Actual
8.75"	0	13,448'	5.5"	17	P110	LTC/ BTC	1.56 2.75 Actual	1.6/ 2.91 Actual	2.63/ 3.74 Actual
						BLM Minimum Safety Factor	1.125	1	1.6 Dry 1.8 Wet

See COA

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

ATTACHMENT TO FORM 3160-3
Nearburg Producing Company OGRID #15742
COTTONWOOD 29-32 FEDERAL COM #1H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	600	13.6	1.75	9.18	10	Lead: Class C + 2% bwoc CalciumChloride + 0.125 bwoc Cello Flake + 4% Gel + 81.4% FW
	250	14.8	1.32	6.35	8	Tail: Class C + 2% bwoc CalciumChloride + 0.125 bwoc Cello Flake + 56.3% FW
Inter.	675	11.8	2.45	13.65	15	Lead: 50:50 Poz (Fly Ash): Class C + 10% bwoc Bentonite + 0.125% bwoc Cello Flake + 5% bwow NaCl + 0.3% bwoc FL-52 + 5% bwoc LCM-1 + 135.5% FW
	370	14.8	1.33	6.33	11	Tail: Class C Neat
Prod.	500	12.5	2.01	11.5	22	Lead: 65:35 Poz (Fly Ash): Class H + 5% bwoc FL-25 + 2% bwoc Benonite + 5% bwow NACL + 3% bwoc CD-32 + 0.2% bwoc R-3 + 0.5% bwoc FL-32A + 102.5% FW
	1500	14.2	1.28	6.54	10	1st Tail: 50:50 Poz (Fly Ash): Class H + .2% bwoc R-3 + 0.125 2% bwoc Cello Flake + 1% bow NaCl + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 58.3% FW
	DV Tool 5800'					
	400	11.4	2.89	15.7	25	2nd stage Lead: Class C + 1% bwoc CaCl + 0.125% Cello Flake + 157.8% FW
	100	13.8	1.37	6.97	7.5	2nd stage Tail: 60/40 Poz (Fly Ash) Class C 1% NaCl + 0.2% R-3 + 0.125% Cello Flake + 0.5% BA-10A + 4% bwoc MPA-5 + 63.2% FW

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0	100%
Intermediate	0	100%
Production	Surface if possible	50%

See COA

KOP 6,113.7'

ATTACHMENT TO FORM 3160-3
Nearburg Producing Company OGRID #15742
COTTONWOOD 29-32 FEDERAL COM #1H

4. Pressure Control Equipment

A. Blowout Preventor (BOP) – Exhibit F-1

BOP installed and tested before drilling which hole?	Size	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	5M	Annular	x	50% of working pressure
			Blind Ram	x	3M
			Pipe Ram	x	
			Double Ram		
			Other*		
8-3/4"	11"	5M	Annular	x	50% testing pressure
			Blind Ram	x	5M
			Pipe Ram	x	
			Double Ram		
			Other*		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

B. Choke Manifold – Exhibit F-2

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and reduce vibration. Choke manifold equipment configuration will be as indicated on the example diagram shown in Exhibit F-2. All valves (except chokes) in the kill line choke manifold and choke line are a type that does not restrict the flow (full opening) and allows a straight through flow. Pressure gauges in the well control system are a type designed for drilling fluid service. The 5K system accumulator has sufficient capacity to close all BOP's and retain 200 psi above precharge using nitrogen bottles that meet manufacturer's specifications. A precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack. The accumulator pressure will be adjusted with nitrogen gas to be within the operating limits as shown Pressure Operating Precharge Pressure rating.

Pressure Rating psi	Operating Pressure psi	Precharge Pressure psi		
		Desired	Maximum	Minimum
1,500	1,500	750	800	700
2,000	2,000	1,000	1,100	900
3,000	3,000	1,000	1,100	900

Power for the closing unit pumps will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure has decreased to the pre-set level. The BOP closing unit will be equipped with sufficient number and sizes of pumps so that, with the accumulator system isolated from service, the pumps will be capable of opening the hydraulically-operated gate valve plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and obtain a minimum of 200 psi above specified accumulator precharge pressure. A manual locking device (i.e., hand wheels) or automatic locking devices will be installed. A valve is installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator system is inoperative.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	420'	FW/Gel	8.4-8.8	34-36	N/C
420'	~~1700'~~ 1600	Brine	10.0-10.2	28-30	N/C
~~1700'~~ 1600	5000'	Cut Brine	9-9.5	28-30	N/C
5000'	13448'	Cut Brine	9-9.5	32-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. PVT/Pason/Visual Monitoring will be used to monitor the loss or gain of fluid.

6. Logging and Testing Procedures

Logging, Coring and Testing	
X	GR-Neutron correlation log prior to building the curve.
X	Possible Rotary Sidewall Cores

7. Drilling Conditions

Bottom Hole pressure at deepest TVD: 3400 psi. No abnormal temperature is anticipated. Mitigation measure for abnormal conditions: Lost circulation material/sweeps/mud scavengers.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM. Please see attached H2S Plan.

Attachments

X Directional Plan
X BOP Diagram (Exhibit F-1)
X Choke Manifold Diagram (Exhibit F-2)
X H2S Plan

Nearburg Producing Co.

Project: Eddy County, NM
Well: #1H
Wellbore: OH
Design: Design #1

M3P DIRECTIONAL SERVICES

Azimuths to Grid North
True North: -8.21°
Magnetic North: 7.39°

Magnetic Field
Strength: 47991.3snT
Dip Angle: 59.77°
Date: 9/3/2015
Model: IGRF2010

WELL @ 3452.9usft (Original Well Elev)
Ground Level: 3434.0

WELL DETAILS

+N/-S	+E/-W	Northing	Easting	Ground Level	3434.0	Latitude	Longitude
0.0	0.0	371049.00	545483.70			32° 1' 12.335 N	104° 19' 11.838 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	1650.0	0.00	0.00	1650.0	0.0	0.0	0.00	0.00	0.0		Start Build 2.00
3	2026.7	7.53	314.28	2025.6	17.3	-17.7	2.00	314.28	-15.1		Start 4086.9 hold at 2026.7 MD
4	8113.7	7.53	314.28	8077.3	391.5	-401.5	0.00	0.00	364.2		KOP - 8113.7 MD 7.53° INC 314.28° AZI
5	7066.3	90.00	179.89	6700.0	-179.4	459.3	10.00	-134.12	208.5	PP(CW29-32#1)	EOC- 7066.3 MD 90.00° INC 179.89° AZI
6	13626.4	90.00	179.89	6700.0	-8938.5	446.2	0.00	0.00	8953.6	PBHL(CW29-32#1)	TD at 13626.4

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL(CW29-32#1)	6700.0	-8938.5	446.2	362109.50	545937.50	32° 0' 3.659 N	104° 19' 17.630 W	Point
- plan hits target center								
PP(CW29-32#1)	6700.0	179.4	459.3	370869.60	545924.40	32° 1' 40.569 N	104° 19' 17.174 W	Point
- plan hits target center								

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

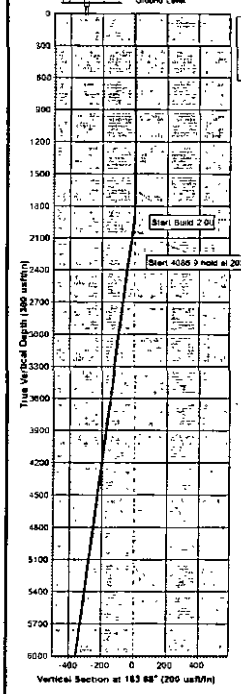
Local Origin: Well #1H Grid North

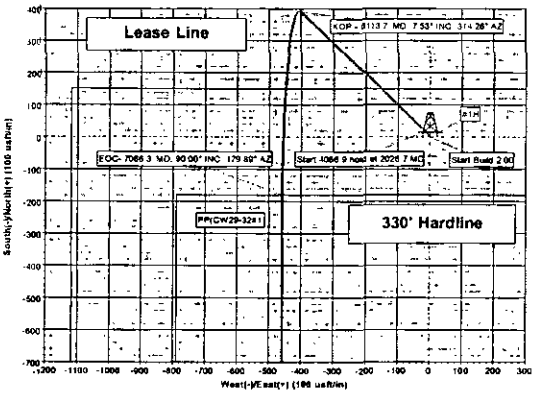
Latitude: 32° 1' 12.335 N
Longitude: 104° 19' 11.838 W

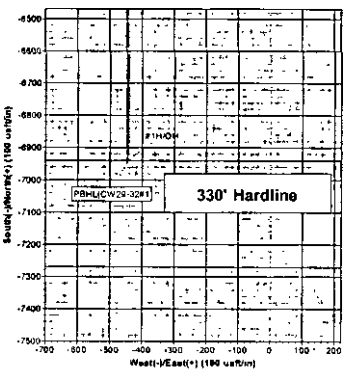
Grid East: 545483.70
Grid North: 371049.00
Scale Factor: 1.000

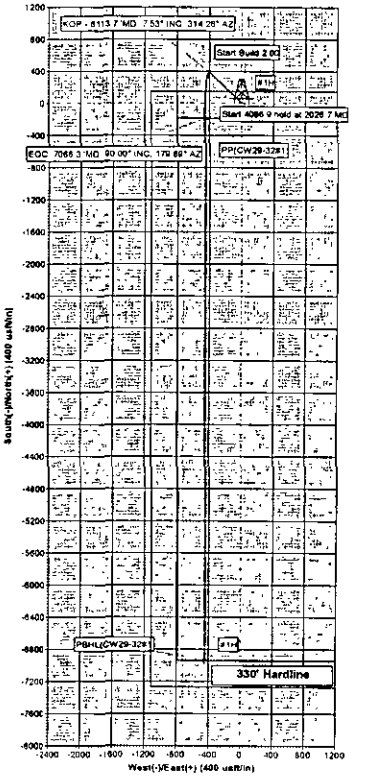
Geomagnetic Model: IGRF2010
Sample Date: 03-Sep-15
Magnetic Declination: 7.40°
Dip Angle from Horizontal: 59.77°
Magnetic Field Strength: 47991

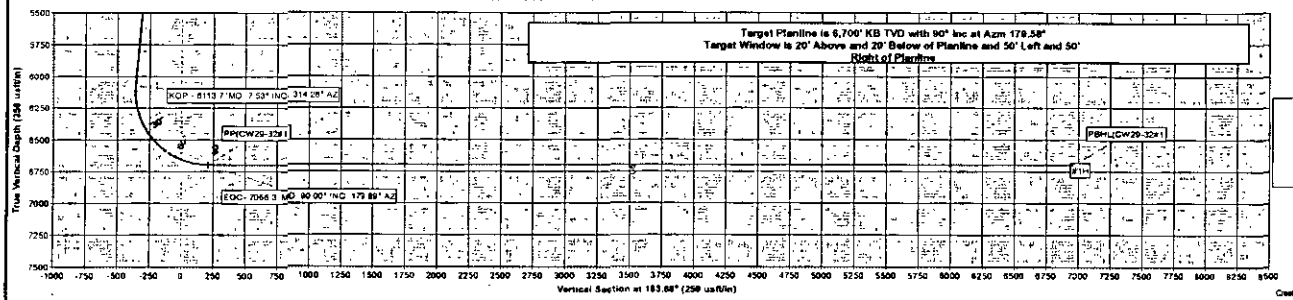
To convert a Magnetic Direction to a Grid Direction, Add 7.39°
To convert a Magnetic Direction to a True Direction, Add 7.40° East
To convert a True Direction to a Grid Direction, Subtract 0.01°











LEGEND
Design #1

Created By: M3P Directional Date: 10:27 September 18 2015

Nearburg Producing Co.

Eddy County, NM
Cottonwood 29-32 Federal Com
#1H

OH

Plan: Design #1

Standard Planning Report

18 September, 2015

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	Nearburg Producing Co.	**TVD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Project:	Eddy County, NM	**MD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Site:	Cottonwood 29-32 Federal Com	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Project Eddy County, NM

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Cottonwood 29-32 Federal Com

Site Position:		**Northing:**	371,049.00 usft	**Latitude:**	32° 1' 12.335 N
From:	Map	**Easting:**	545,483.70 usft	**Longitude:**	104° 19' 11.838 W
Position Uncertainty:	3.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.01 °

Well #1H

Well Position	**+N/-S**	0.0 usft	**Northing:**	371,049.00 usft	**Latitude:**	32° 1' 12.335 N
	+E/-W	0.0 usft	**Easting:**	545,483.70 usft	**Longitude:**	104° 19' 11.838 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,434.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/3/2015	7.40	59.77	47,991

Design Design #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	183.68

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	
1,650.0	0.00	0.00	1,650.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,026.7	7.53	314.26	2,025.6	17.3	-17.7	2.00	2.00	0.00	314.26	
6,113.7	7.53	314.26	6,077.3	391.3	-401.5	0.00	0.00	0.00	0.00	
7,066.3	90.00	179.89	6,700.0	-179.4	-459.3	10.00	8.66	-14.11	-134.12	PP(CW29-32#1)
13,826.4	90.00	179.89	6,700.0	-6,939.5	-446.2	0.00	0.00	0.00	0.00	PBHL(CW29-32#1)

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	Nearburg Producing Co.	**TVD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Project:	Eddy County, NM	**MD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Site:	Cottonwood 29-32 Federal Com	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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
1,650.0	0.00	0.00	1,650.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,700.0	1.00	314.26	1,700.0	0.3	-0.3	-0.3	2.00	2.00	0.00
1,800.0	3.00	314.26	1,799.9	2.7	-2.8	-2.6	2.00	2.00	0.00
1,900.0	5.00	314.26	1,899.7	7.6	-7.8	-7.1	2.00	2.00	0.00
2,000.0	7.00	314.26	1,999.1	14.9	-15.3	-13.9	2.00	2.00	0.00
2,026.7	7.53	314.26	2,025.6	17.3	-17.7	-16.1	2.00	2.00	0.00
Start 4086.9 hold at 2026.7 MD									
2,100.0	7.53	314.26	2,098.3	24.0	-24.6	-22.3	0.00	0.00	0.00
2,200.0	7.53	314.26	2,197.4	33.1	-34.0	-30.9	0.00	0.00	0.00
2,300.0	7.53	314.26	2,296.6	42.3	-43.4	-39.4	0.00	0.00	0.00
2,400.0	7.53	314.26	2,395.7	51.4	-52.8	-47.9	0.00	0.00	0.00
2,500.0	7.53	314.26	2,494.8	60.6	-62.2	-56.5	0.00	0.00	0.00
2,600.0	7.53	314.26	2,594.0	69.7	-71.6	-65.0	0.00	0.00	0.00
2,700.0	7.53	314.26	2,693.1	78.9	-80.9	-73.5	0.00	0.00	0.00
2,800.0	7.53	314.26	2,792.2	88.0	-90.3	-82.0	0.00	0.00	0.00
2,900.0	7.53	314.26	2,891.4	97.2	-99.7	-90.6	0.00	0.00	0.00
3,000.0	7.53	314.26	2,990.5	106.3	-109.1	-99.1	0.00	0.00	0.00
3,100.0	7.53	314.26	3,089.6	115.5	-118.5	-107.6	0.00	0.00	0.00
3,200.0	7.53	314.26	3,188.8	124.6	-127.9	-116.2	0.00	0.00	0.00
3,300.0	7.53	314.26	3,287.9	133.8	-137.3	-124.7	0.00	0.00	0.00
3,400.0	7.53	314.26	3,387.1	142.9	-146.7	-133.2	0.00	0.00	0.00
3,500.0	7.53	314.26	3,486.2	152.1	-156.1	-141.8	0.00	0.00	0.00
3,600.0	7.53	314.26	3,585.3	161.2	-165.5	-150.3	0.00	0.00	0.00
3,700.0	7.53	314.26	3,684.5	170.4	-174.9	-158.8	0.00	0.00	0.00
3,800.0	7.53	314.26	3,783.6	179.5	-184.2	-167.3	0.00	0.00	0.00
3,900.0	7.53	314.26	3,882.7	188.7	-193.6	-175.9	0.00	0.00	0.00
4,000.0	7.53	314.26	3,981.9	197.8	-203.0	-184.4	0.00	0.00	0.00
4,100.0	7.53	314.26	4,081.0	207.0	-212.4	-192.9	0.00	0.00	0.00
4,200.0	7.53	314.26	4,180.2	216.1	-221.8	-201.5	0.00	0.00	0.00
4,300.0	7.53	314.26	4,279.3	225.3	-231.2	-210.0	0.00	0.00	0.00
4,400.0	7.53	314.26	4,378.4	234.4	-240.6	-218.5	0.00	0.00	0.00
4,500.0	7.53	314.26	4,477.6	243.6	-250.0	-227.0	0.00	0.00	0.00
4,600.0	7.53	314.26	4,576.7	252.7	-259.4	-235.6	0.00	0.00	0.00
4,700.0	7.53	314.26	4,675.8	261.9	-268.8	-244.1	0.00	0.00	0.00
4,800.0	7.53	314.26	4,775.0	271.0	-278.2	-252.6	0.00	0.00	0.00
4,900.0	7.53	314.26	4,874.1	280.2	-287.6	-261.2	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	Nearburg Producing Co.	**TVD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Project:	Eddy County, NM	**MD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Site:	Cottonwood 29-32 Federal Com	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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)
5,000.0	7.53	314.26	4,973.2	289.3	-296.9	-269.7	0.00	0.00	0.00
5,100.0	7.53	314.26	5,072.4	298.5	-306.3	-278.2	0.00	0.00	0.00
5,200.0	7.53	314.26	5,171.5	307.6	-315.7	-286.8	0.00	0.00	0.00
5,300.0	7.53	314.26	5,270.7	316.8	-325.1	-295.3	0.00	0.00	0.00
5,400.0	7.53	314.26	5,369.8	326.0	-334.5	-303.8	0.00	0.00	0.00
5,500.0	7.53	314.26	5,468.9	335.1	-343.9	-312.3	0.00	0.00	0.00
5,600.0	7.53	314.26	5,568.1	344.3	-353.3	-320.9	0.00	0.00	0.00
5,700.0	7.53	314.26	5,667.2	353.4	-362.7	-329.4	0.00	0.00	0.00
5,800.0	7.53	314.26	5,766.3	362.6	-372.1	-337.9	0.00	0.00	0.00
5,900.0	7.53	314.26	5,865.5	371.7	-381.5	-346.5	0.00	0.00	0.00
6,000.0	7.53	314.26	5,964.6	380.9	-390.9	-355.0	0.00	0.00	0.00
6,100.0	7.53	314.26	6,063.7	390.0	-400.2	-363.5	0.00	0.00	0.00
6,113.7	7.53	314.26	6,077.3	391.3	-401.5	-364.7	0.00	0.00	0.00
KOP - 6113.7 'MD, 7.53° INC, 314.26° AZI									
6,150.0	5.64	286.68	6,113.4	393.4	-404.9	-366.6	10.00	-5.21	-75.89
6,200.0	6.37	237.83	6,163.2	392.7	-409.6	-365.6	10.00	1.45	-97.68
6,250.0	9.95	212.49	6,212.7	387.5	-414.3	-360.2	10.00	7.18	-50.69
6,300.0	14.40	201.49	6,261.5	378.1	-418.9	-350.4	10.00	8.90	-22.00
6,350.0	19.12	195.71	6,309.4	364.4	-423.4	-336.5	10.00	9.44	-11.55
6,400.0	23.96	192.18	6,355.9	346.6	-427.8	-318.4	10.00	9.66	-7.07
6,450.0	28.84	189.78	6,400.7	324.8	-432.0	-296.4	10.00	9.77	-4.80
6,500.0	33.76	188.02	6,443.4	299.1	-436.0	-270.5	10.00	9.83	-3.51
6,550.0	38.69	186.67	6,483.7	269.8	-439.7	-241.1	10.00	9.87	-2.71
6,600.0	43.64	185.58	6,521.3	237.1	-443.2	-208.2	10.00	9.90	-2.18
6,650.0	48.60	184.67	6,556.0	201.2	-446.4	-172.2	10.00	9.91	-1.82
6,700.0	53.56	183.89	6,587.4	162.4	-449.3	-133.3	10.00	9.93	-1.56
6,750.0	58.53	183.21	6,615.3	121.1	-451.9	-91.8	10.00	9.94	-1.37
6,800.0	63.50	182.59	6,639.5	77.4	-454.1	-48.1	10.00	9.94	-1.23
6,850.0	68.47	182.03	6,659.8	31.8	-455.9	-2.5	10.00	9.95	-1.13
6,900.0	73.45	181.50	6,676.2	-15.5	-457.4	44.8	10.00	9.95	-1.05
6,950.0	78.43	181.00	6,688.3	-63.9	-458.4	93.2	10.00	9.95	-1.00
7,000.0	83.40	180.52	6,696.2	-113.3	-459.1	142.5	10.00	9.95	-0.97
7,050.0	88.38	180.04	6,699.8	-163.1	-459.3	192.3	10.00	9.96	-0.95
7,066.3	90.00	179.89	6,700.0	-179.4	-459.3	208.5	10.00	9.96	-0.94
EOC - 7066.3 'MD, 90.00° INC, 179.89° AZI - PP(CW29-32#1)									
7,100.0	90.00	179.89	6,700.0	-213.1	-459.2	242.2	0.00	0.00	0.00
7,200.0	90.00	179.89	6,700.0	-313.1	-459.0	341.9	0.00	0.00	0.00
7,300.0	90.00	179.89	6,700.0	-413.1	-458.8	441.7	0.00	0.00	0.00
7,400.0	90.00	179.89	6,700.0	-513.1	-458.7	541.5	0.00	0.00	0.00
7,500.0	90.00	179.89	6,700.0	-613.1	-458.5	641.3	0.00	0.00	0.00
7,600.0	90.00	179.89	6,700.0	-713.1	-458.3	741.1	0.00	0.00	0.00
7,700.0	90.00	179.89	6,700.0	-813.1	-458.1	840.9	0.00	0.00	0.00
7,800.0	90.00	179.89	6,700.0	-913.1	-457.9	940.6	0.00	0.00	0.00
7,900.0	90.00	179.89	6,700.0	-1,013.1	-457.7	1,040.4	0.00	0.00	0.00
8,000.0	90.00	179.89	6,700.0	-1,113.1	-457.5	1,140.2	0.00	0.00	0.00
8,100.0	90.00	179.89	6,700.0	-1,213.1	-457.3	1,240.0	0.00	0.00	0.00
8,200.0	90.00	179.89	6,700.0	-1,313.1	-457.1	1,339.8	0.00	0.00	0.00
8,300.0	90.00	179.89	6,700.0	-1,413.1	-456.9	1,439.5	0.00	0.00	0.00
8,400.0	90.00	179.89	6,700.0	-1,513.1	-456.7	1,539.3	0.00	0.00	0.00
8,500.0	90.00	179.89	6,700.0	-1,613.1	-456.5	1,639.1	0.00	0.00	0.00
8,600.0	90.00	179.89	6,700.0	-1,713.1	-456.3	1,738.9	0.00	0.00	0.00
8,700.0	90.00	179.89	6,700.0	-1,813.1	-456.1	1,838.7	0.00	0.00	0.00
8,800.0	90.00	179.89	6,700.0	-1,913.1	-455.9	1,938.4	0.00	0.00	0.00
8,900.0	90.00	179.89	6,700.0	-2,013.1	-455.7	2,038.2	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	Nearburg Producing Co.	**TVD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Project:	Eddy County, NM	**MD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Site:	Cottonwood 29-32 Federal Com	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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)
9,000.0	90.00	179.89	6,700.0	-2,113.1	-455.6	2,138.0	0.00	0.00	0.00
9,100.0	90.00	179.89	6,700.0	-2,213.1	-455.4	2,237.8	0.00	0.00	0.00
9,200.0	90.00	179.89	6,700.0	-2,313.1	-455.2	2,337.6	0.00	0.00	0.00
9,300.0	90.00	179.89	6,700.0	-2,413.1	-455.0	2,437.4	0.00	0.00	0.00
9,400.0	90.00	179.89	6,700.0	-2,513.1	-454.8	2,537.1	0.00	0.00	0.00
9,500.0	90.00	179.89	6,700.0	-2,613.1	-454.6	2,636.9	0.00	0.00	0.00
9,600.0	90.00	179.89	6,700.0	-2,713.1	-454.4	2,736.7	0.00	0.00	0.00
9,700.0	90.00	179.89	6,700.0	-2,813.1	-454.2	2,836.5	0.00	0.00	0.00
9,800.0	90.00	179.89	6,700.0	-2,913.1	-454.0	2,936.3	0.00	0.00	0.00
9,900.0	90.00	179.89	6,700.0	-3,013.1	-453.8	3,036.0	0.00	0.00	0.00
10,000.0	90.00	179.89	6,700.0	-3,113.1	-453.6	3,135.8	0.00	0.00	0.00
10,100.0	90.00	179.89	6,700.0	-3,213.1	-453.4	3,235.6	0.00	0.00	0.00
10,200.0	90.00	179.89	6,700.0	-3,313.1	-453.2	3,335.4	0.00	0.00	0.00
10,300.0	90.00	179.89	6,700.0	-3,413.1	-453.0	3,435.2	0.00	0.00	0.00
10,400.0	90.00	179.89	6,700.0	-3,513.1	-452.8	3,534.9	0.00	0.00	0.00
10,500.0	90.00	179.89	6,700.0	-3,613.1	-452.6	3,634.7	0.00	0.00	0.00
10,600.0	90.00	179.89	6,700.0	-3,713.1	-452.5	3,734.5	0.00	0.00	0.00
10,700.0	90.00	179.89	6,700.0	-3,813.1	-452.3	3,834.3	0.00	0.00	0.00
10,800.0	90.00	179.89	6,700.0	-3,913.1	-452.1	3,934.1	0.00	0.00	0.00
10,900.0	90.00	179.89	6,700.0	-4,013.1	-451.9	4,033.9	0.00	0.00	0.00
11,000.0	90.00	179.89	6,700.0	-4,113.1	-451.7	4,133.6	0.00	0.00	0.00
11,100.0	90.00	179.89	6,700.0	-4,213.1	-451.5	4,233.4	0.00	0.00	0.00
11,200.0	90.00	179.89	6,700.0	-4,313.1	-451.3	4,333.2	0.00	0.00	0.00
11,300.0	90.00	179.89	6,700.0	-4,413.1	-451.1	4,433.0	0.00	0.00	0.00
11,400.0	90.00	179.89	6,700.0	-4,513.1	-450.9	4,532.8	0.00	0.00	0.00
11,500.0	90.00	179.89	6,700.0	-4,613.1	-450.7	4,632.5	0.00	0.00	0.00
11,600.0	90.00	179.89	6,700.0	-4,713.1	-450.5	4,732.3	0.00	0.00	0.00
11,700.0	90.00	179.89	6,700.0	-4,813.1	-450.3	4,832.1	0.00	0.00	0.00
11,800.0	90.00	179.89	6,700.0	-4,913.1	-450.1	4,931.9	0.00	0.00	0.00
11,900.0	90.00	179.89	6,700.0	-5,013.1	-449.9	5,031.7	0.00	0.00	0.00
12,000.0	90.00	179.89	6,700.0	-5,113.1	-449.7	5,131.4	0.00	0.00	0.00
12,100.0	90.00	179.89	6,700.0	-5,213.1	-449.5	5,231.2	0.00	0.00	0.00
12,200.0	90.00	179.89	6,700.0	-5,313.1	-449.4	5,331.0	0.00	0.00	0.00
12,300.0	90.00	179.89	6,700.0	-5,413.1	-449.2	5,430.8	0.00	0.00	0.00
12,400.0	90.00	179.89	6,700.0	-5,513.1	-449.0	5,530.6	0.00	0.00	0.00
12,500.0	90.00	179.89	6,700.0	-5,613.1	-448.8	5,630.4	0.00	0.00	0.00
12,600.0	90.00	179.89	6,700.0	-5,713.1	-448.6	5,730.1	0.00	0.00	0.00
12,700.0	90.00	179.89	6,700.0	-5,813.1	-448.4	5,829.9	0.00	0.00	0.00
12,800.0	90.00	179.89	6,700.0	-5,913.1	-448.2	5,929.7	0.00	0.00	0.00
12,900.0	90.00	179.89	6,700.0	-6,013.1	-448.0	6,029.5	0.00	0.00	0.00
13,000.0	90.00	179.89	6,700.0	-6,113.1	-447.8	6,129.3	0.00	0.00	0.00
13,100.0	90.00	179.89	6,700.0	-6,213.1	-447.6	6,229.0	0.00	0.00	0.00
13,200.0	90.00	179.89	6,700.0	-6,313.1	-447.4	6,328.8	0.00	0.00	0.00
13,300.0	90.00	179.89	6,700.0	-6,413.1	-447.2	6,428.6	0.00	0.00	0.00
13,400.0	90.00	179.89	6,700.0	-6,513.1	-447.0	6,528.4	0.00	0.00	0.00
13,500.0	90.00	179.89	6,700.0	-6,613.1	-446.8	6,628.2	0.00	0.00	0.00
13,600.0	90.00	179.89	6,700.0	-6,713.1	-446.6	6,727.9	0.00	0.00	0.00
13,700.0	90.00	179.89	6,700.0	-6,813.1	-446.4	6,827.7	0.00	0.00	0.00
13,800.0	90.00	179.89	6,700.0	-6,913.1	-446.3	6,927.5	0.00	0.00	0.00
13,826.4	90.00	179.89	6,700.0	-6,939.5	-446.2	6,953.8	0.00	0.00	0.00

TD at 13826.4 - PBHL(CW29-32#1)

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	Nearburg Producing Co.	**TVD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Project:	Eddy County, NM	**MD Reference:**	WELL @ 3452.0usft (Original Well Elev)
Site:	Cottonwood 29-32 Federal Com	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Design Targets

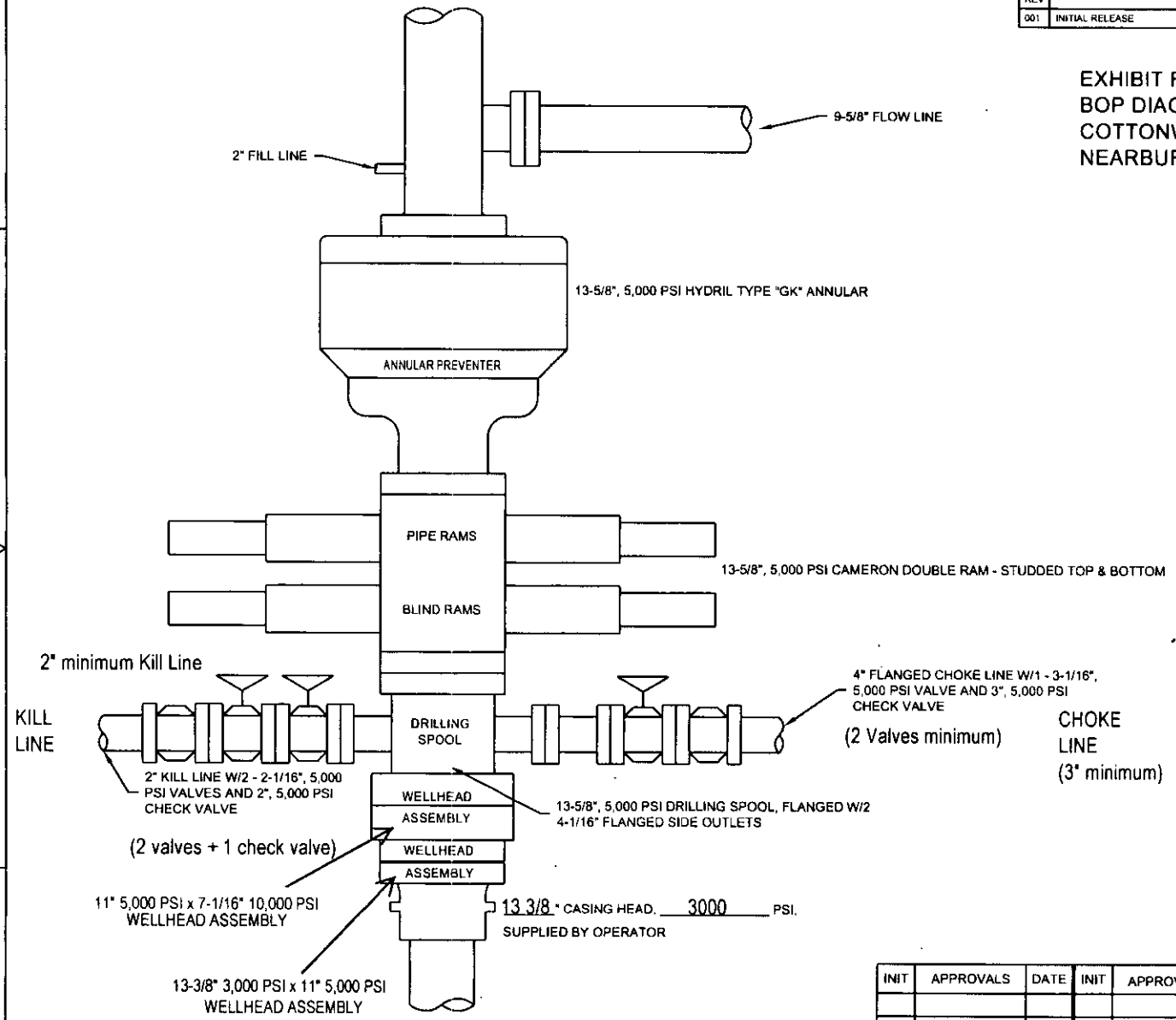
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL(CW29-32#1) - plan hits target center - Point	0.00	0.00	6,700.0	-6,939.5	-446.2	364,109.50	545,037.50	32° 0' 3.659 N	104° 19' 17.030 W
PP(CW29-32#1) - plan hits target center - Point	0.00	0.00	6,700.0	-179.4	-459.3	370,869.60	545,024.40	32° 1' 10.560 N	104° 19' 17.174 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,650.0	1,650.0	0.0	0.0	Start Build 2.00
2,026.7	2,025.6	17.3	-17.7	Start 4086.9 hold at 2026.7 MD
6,113.7	6,077.3	391.3	-401.5	KOP - 6113.7 'MD, 7.53° INC, 314.26° AZI
7,066.3	6,700.0	-179.4	-459.3	EOC- 7066.3 'MD, 90.00° INC, 179.89° AZI
13,826.4	6,700.0	-6,939.5	-446.2	TD at 13826.4

REVISION HISTORY				
REV	DESCRIPTION	INCORP BY	DATE	CHECKED
001	INITIAL RELEASE	DJF	22-NOV-2011	

EXHIBIT F-1
BOP DIAGRAM
COTTONWOOD 29-32 FEDERAL COM #1H
NEARBURG PRODUCING COMPANY



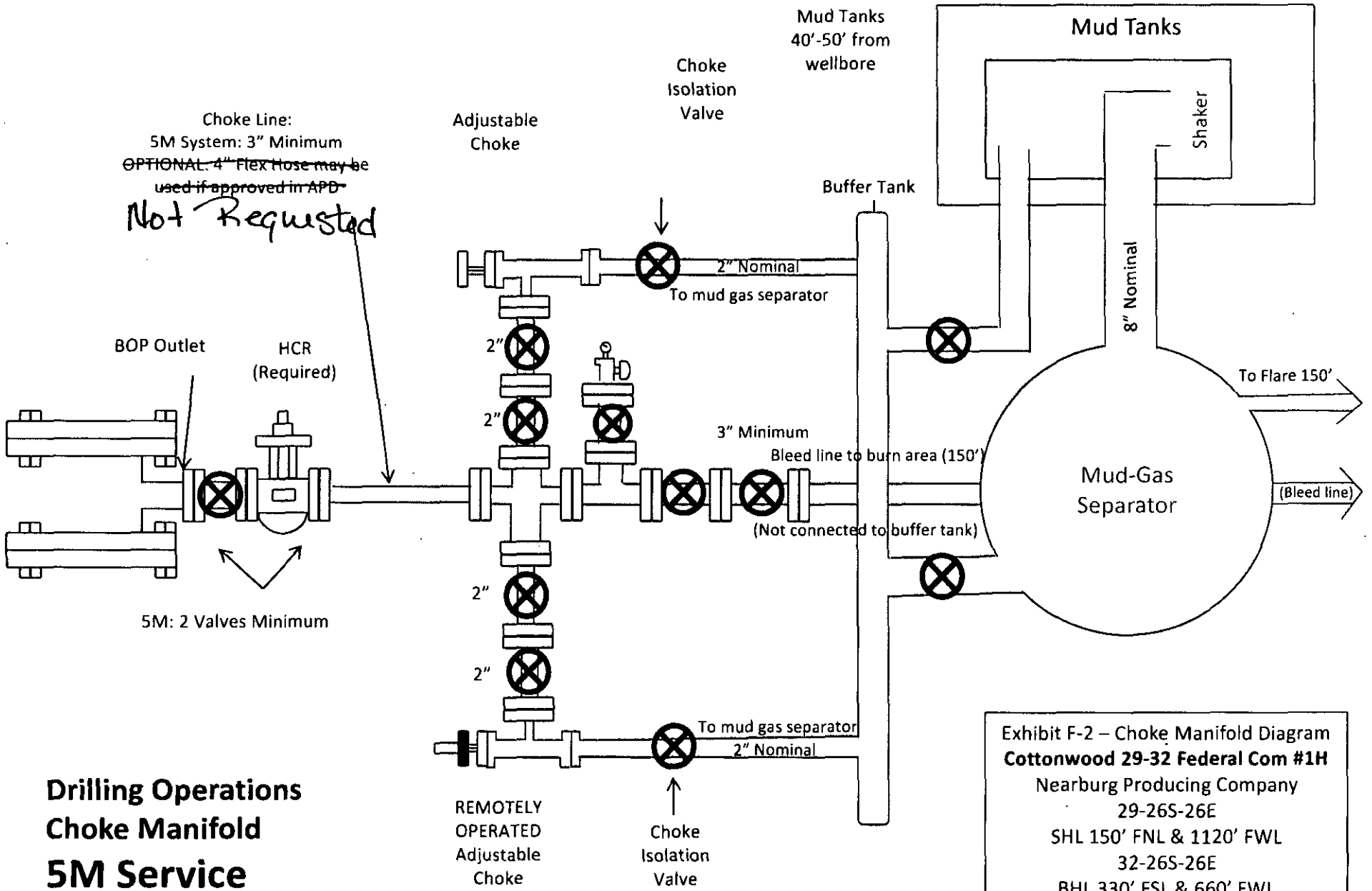
INIT	APPROVALS	DATE	INIT	APPROVALS	DATE

Aquila Sedco Drilling Co., LP
3525 K-ELL BLVD., SUITE 325
WICHITA FALLS, TEXAS 76308
(940)761-5153

TITLE
13-5/8", 5,000 PSI BOP ANNULAR & DOUBLE RAM W/13-5/8", 10,000 PSI MUD CROSS & DSA

SIZE	CAGE CODE	DWG NO.	REV
C		2011-22001-01	001

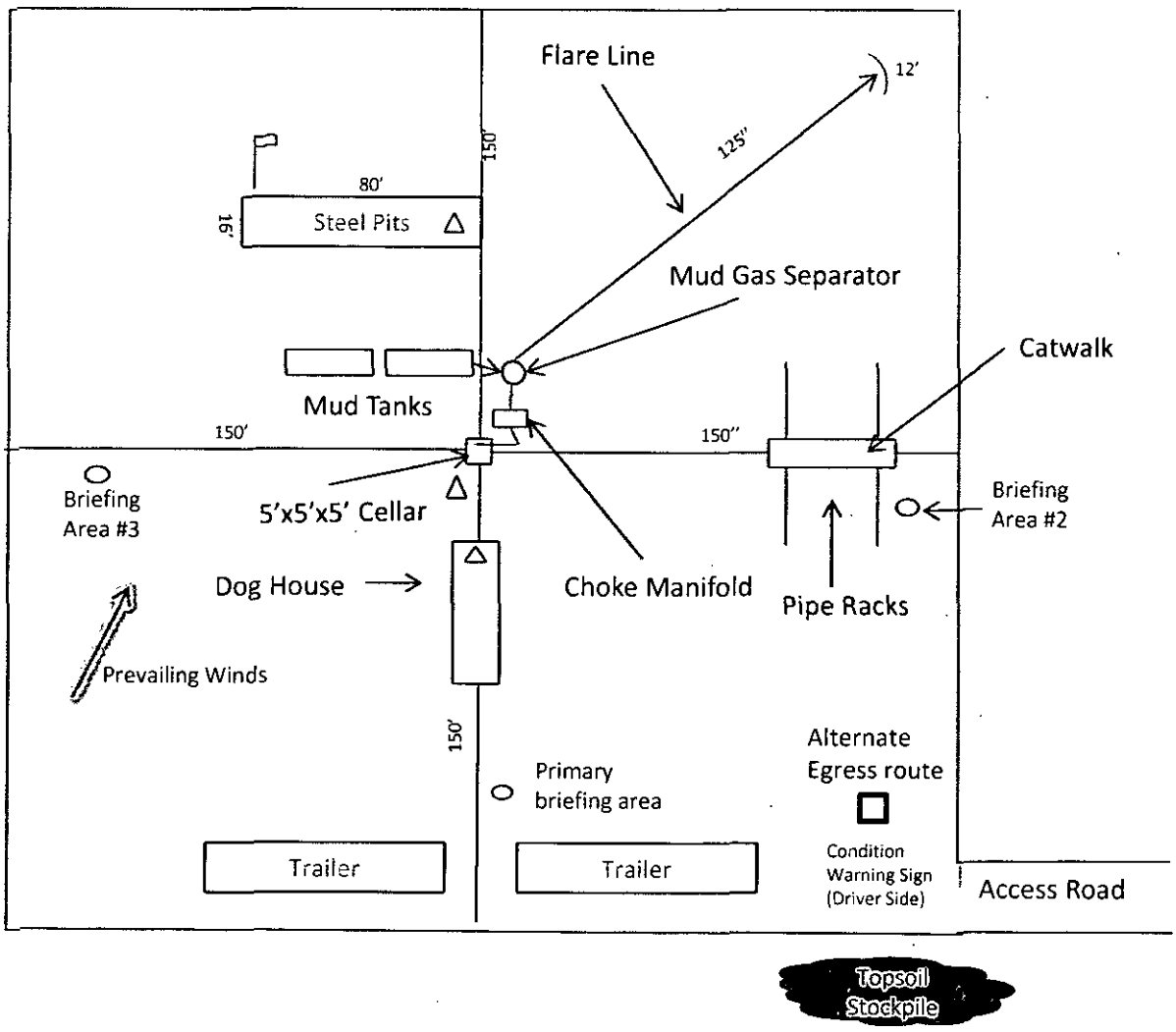
SCALE: NONE | NOT TO SCALE | SHEET 1 OF 1



Drilling Operations
Choke Manifold
5M Service

Exhibit F-2 – Choke Manifold Diagram
Cottonwood 29-32 Federal Com #1H
Nearburg Producing Company
29-26S-26E
SHL 150' FNL & 1120' FWL
32-26S-26E
BHL 330' FSL & 660' FWL
Eddy County, NM

V-door East



Wind Direction Indicators (wind sock or streamers)

△ • H2S Monitors (alarms at bell nipple and shale shaker)

Briefing Areas

N

Exhibit G – Rig Diagram
Cottonwood 29-32 Federal Com #1H
Nearburg Producing Company
SHL 150' FNL & 1120' FWL, 29-26S-26E
BHL 330' FSL & 660' FWL, 32-26S-26E
Eddy County, NM

NEARBURG PRODUCING COMPANY
COTTONWOOD 29-32 FEDERAL COM #1H

Hydrogen Sulfide Drilling Plan Summary

(attach to detailed H2S Plan)

A. All personnel shall receive proper H2S training according to Onshore Order III.C.3.a.
B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
C. Required Emergency Equipment:

- Well control equipment
  a. Flare line 150' from wellhead to be ignited by flare gun
  b. Choke manifold with a remotely-operated choke
  c. Mud/gas separator
- Protective equipment for essential personnel
  Breathing Apparatus:
  a. Rescue Packs (SCBA): One unit placed at each breathing area; two units stored in the safety trailer.
  b. Work/Escape packs: Four packs stored on the rig floor with sufficient air hose not to restrict work activity.
  c. Emergency Escape Packs: Four packs stored in the doghouse for emergency evacuation.
  Auxiliary Rescue Equipment:
  a. Stretcher
  b. Two OSHA full body harnesses
  c. 100' of 5/8" OSHA-approved rope
  d. 1-20# Class ABC fire extinguisher
- H2S Detection and Monitoring Equipment:
  The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm at 10 ppm and audible at 15 ppm. Calibrate a minimum of every 30 days or as needed. Sensors will be placed in the following places: Rig floor; Bell nipple; End of flow line or where well bore fluid is being discharged. (Gas sample tubes will be stored in the safety trailer)
- Visual warning systems.
  a. One color-code condition sign placed at site entrance reflecting possible conditions at the site.
  b. A colored condition flag on display, reflecting the current condition at the site.
  c. Two wind socks placed in strategic locations, visible from all angles.
- Mud program:
  The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.
- Metallurgy:
  a. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
  b. All elastomers used for packing and seals shall be H2S trim.
- Communication:
  Communication will be via cell phones and land lines.

NEARBURG PRODUCING COMPANY

HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN
FOR DRILLING / COMPLETING / WORKOVER / FACILITY
WITH THE EXPECTATION OF H2S IN EXCESS OF 100 PPM

NEARBURG PRODUCING COMPANY
NEW DRILL WELL:

COTTONWOOD 29-32 FEDERAL COM #1H
SHL: 150' FNL and 1120' FWL, Unit D
Sec 29, T26S, R26E
BHL: 330' FSL and 660' FWL, Lot 4
Sec 32, T26S, R26E
Eddy County, New Mexico

This well/facility is not expected to have H2S, but the following is submitted as requested.

TABLE OF CONTENTS

GENERAL H2S EMERGENCY ACTIONS

In the event of any evidence of H2S emergency, the following plan will be initiated:

1. All personnel will immediately evacuate to an upwind and if possible uphill "safe area."
2. If for any reason a person must enter the hazardous area, they must wear a SCBA (self-contained breathing apparatus).
3. Always use the "buddy system."
4. Isolate the well/problem if possible.
5. Account for all personnel.
6. Display the proper colors warning all unsuspecting personnel of the danger at hand.
7. Contact the company representative as soon as possible if not at the location (use the enclosed call list as instructed).

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H2S

1. All personnel will don the self-contained breathing apparatus.
2. Remove all personnel to the "safe area" (always use the "buddy system").
3. Contact company representative if not on location.
4. Set in motion the steps to protect and/or remove the general public to any upwind "safe area." Maintain strict security and safety procedures while dealing with the source.
5. No entry to any unauthorized personnel.
6. Notify the appropriate agencies: City Police - City streets
   State Police - State Roads
   County Sheriff - County Roads
7. Call the NMOCD.

If at this time the supervising person determines the release of H2S cannot be contained to the site location and the general public is in harm's way, he will immediately notify public safety personnel.

EMERGENCY CALL LIST

	Office	Cell	
Matt Lee	(575) 746-0422	(575) 365-6662	Drilling/Operations Manager
Michael Griffin	(214) 561-2122	(832) 465-5822	Chief Technical Officer
NPC Office-Midland	(432) 686-8235		

EMERGENCY RESPONSE NUMBERS

Eddy County, New Mexico

State Police – Carlsbad	575-885-3137
City Police – Carlsbad	575-885-2111
State & City Police - Artesia	575-746-2703
Eddy County Sheriff - Carlsbad	575-887-7551
Fire Department – Carlsbad	575-887-3798
Fire Department – Artesia	575-746-2701
Local Emergency Planning – Carlsbad	575-887-6544
Local Emergency Planning – Artesia	575-746-2122
New Mexico Oil Conservation Division - Carlsbad	575-748-1283
Randy Dade – OCD District Supervisor-Carlsbad	575-626-1372 (cell)
Bureau of Land Management - Carlsbad	575-234-5972
State Emergency Response Center (SERC) – Santa Fe	505-476-9600
24 hour	505-827-9126
NM State Emergency Operations Center	505-476-9635
National Emergency Response Center (Washington DC)	800-424-8802

Other:

Boots & Coots IWC	800-256-9688 or	281-934-8884
Cudd Pressure Control	432-699-0139 or	432-563-3356
Halliburton		575-746-2757
BJ Services		575-746-3569
Flight for Life – 4000 24th St, Lubbock, Texas		806-743-9911
Aerocare – R3, Box 49F, Lubbock, Texas		806-747-8923
Med Flight Air Ambulance – 2301 Yale Blvd., Albuq, NM		505-842-4433
SB Aid Med Serv – 2505 Clark Carr Loop SE, Albuq, NM		505-842-4949

PROTECTION OF THE GENERAL (ROE) RADIUS OF EXPOSURE

In the event greater than 100 ppm H2S is present, the ROE calculations will be done to determine if the following conditions exist and whether the Plan must be activated:

* 100 ppm at any public area (any place not associated with this site)

* 500 ppm at any public road (any road which the general public may travel).

* 100 ppm radius of 3000' will be assumed if there is insufficient data to do the calculations, and there is a reasonable expectation that H2S could be present in concentrations greater than 100 ppm in the gas mixture.

Calculation for the 100 ppm ROE: (H2S concentrations in decimal form)

ROE = [(1.589)(H2S concentration)(Q)] (^0.6258) 10,000 ppm + = .01
1,000 ppm + = .001
Calculation for the 500 ppm ROE: 100 ppm + = .0001
10 ppm + = .00001
ROE = [(0.4546)(H2S concentration)(Q)] (^0.6258)

EXAMPLE: If a well/facility has been determined to have 650 ppm H2S in the gas mixture and the well/facility is producing at a gas rate of 200 MCFD then:

ROE for 100 ppm ROE=[(1.589)(.00065)(200,000)] ^0.6258
ROE=28.1'
ROE for 500 ppm ROE=[(.4546)(.00065)(200,000)] ^0.6258
ROE=12.8'
These calculations will be forwarded to the appropriate NMOCD district office when applicable.

PUBLIC EVACUATION PLAN

When the supervisor has determined that the general public will be involved, the following plan will be implemented.

1. Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.
2. A trained person in H2S safety shall monitor with detection equipment the H2S concentration, wind and area of exposure. This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. All monitoring equipment shall be UL approved for use in Class I Groups A, B, C & D, Division I hazardous locations. All monitors will have a minimum capability of measuring H2S, oxygen, and flammable values.
3. Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.
4. The company representative shall stay in communication with all agencies throughout the duration of the situation and inform such agencies when the situation has been contained and the affected area is safe to enter.

PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION

The decision to ignite a well should be a last resort with one, if not both, of the following conditions:

1. Human life and/or property are endangered.
2. There is no hope of bringing the situation under control with the prevailing conditions at the site.

Instructions for Igniting the Well:

1. Two people are required. They must be equipped with positive pressure, self-contained breathing apparatus and "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.
2. One of the people will be a qualified safety person who will test the atmosphere for H2S, oxygen and LFL. The other person will be the designated company representative.
3. Ignite upwind from a distance no closer than necessary. Make sure that the ignition site has the maximum escape avenue available. A 25mm flare gun with a range of approximately +/- 500 feet shall be used to ignite the gas.
4. Before igniting, check for the presence of combustible gases.
5. After igniting, continue emergency actions and procedures as before.

REQUIRED EMERGENCY EQUIPMENT

1. Breathing Apparatus

- Rescue Packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- Work / Escape Packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

2. Signage and Flagging

- One Color Code Condition Sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- A Colored Condition flag will be on display reflecting the condition at the site at that time.

3. Briefing Area

- Two perpendicular areas will be designated by signs and readily accessible.

4. Windsocks

- Two windsocks will be placed in strategic locations, visible from all angles.

5. H2S Detectors and Alarms

- The stationary detector with three (3) sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible alarm @ 15 ppm. Calibrate a

minimum of every 30 days or as needed. The three sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer):

- Rig Floor
- Bell Nipple
- End of flow line or where well bore fluid is being discharged

6. **Auxiliary Rescue Equipment**
   - Stretcher
   - Two OSHA full body harnesses
   - 100' of 5/8" OSHA approved rope
   - One 20 lb. Class ABC fire extinguisher
   - Communication via cell phones on location and vehicles on location

USING SELF-CONTAINED BREATHING AIR EQUIPMENT (SCBA)

1. SCBA should be worn when any of the following are performed:
   - Working near the top or on top of a tank
   - Disconnecting any line where H2S can reasonably be expected.
   - Sampling air in the area to determine if toxic concentrations of H2S exist.
   - Working in areas where over 10 ppm of H2S has been detected.
   - At any time there is a doubt of the level of H2S in the area.
2. All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.
3. Facial hair and standard eyeglasses are not allowed with SCBA.
4. Contact lenses are never allowed with SCBA.
5. When breaking out any line where H2S can reasonably be expected.
6. After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected.
7. All SCBA shall be inspected monthly.

RESCUE & FIRST AID FOR VICTIMS OF H2S POISONING

- Do not panic.
- Remain calm and think.
- Put on the breathing apparatus.
- Remove the victim to the safe breathing area as quickly as possible, upwind and uphill from source or crosswind to achieve upwind.
- Notify emergency response personnel.
- Provide artificial respiration and/or CPR as necessary.
- Remove all contaminated clothing to avoid further exposure.
- A minimum of two (2) personnel on location shall be trained in CPR and First Aid.

TOXIC EFFECTS OF H2S POISONING

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity-1.192) and is colorless and transparent. Hydrogen Sulfide is almost as toxic as Hydrogen Cyanide and is 5-6 times more toxic that Carbon Monoxide. Occupational exposure limits for Hydrogen sulfide and other gasses are compared below in Table 1. Toxicity table for H2S and physical effects are shown in Table II.

Table 1

Permissible Exposure Limits of Various Gasses

Common Name	Symbol	Sp. Gravity	TLV	STEL	IDLH
Hydrogen Cyanide	HCN	.94	4.7 ppm	C	
Hydrogen Sulfide	H2S	1.192	10 ppm	15 ppm	100 ppm
Sulfide Dioxide	SO2	2.21	2 ppm	5 ppm	
Chlorine	CL	2.45	.5 ppm	1 ppm	
Carbon Monoxide	CO	.97	25 ppm	200 ppm	
Carbon Dioxide	CO2	1.52	5000 ppm	30,000 ppm	
Methane	CH4	.55	4.7% LEL	14% UEL	

Definitions

A. TLV – Threshold Limit Value is the concentration employees may be exposed to based on a TWA (time weighted average) for eight (8) hours in one day for 40 hours in one (1) week. This is set by ACGIH (American Conference of Governmental Hygienists and regulated by OSHA.

B. STEL – Short Term Exposure Limit is the 15 minute average concentration an employee may be exposed to providing that the highest exposure never exceeds the OEL (Occupational Exposure Limit). The OEL for H2S is 19 PPM.

C. IDLH – Immediately Dangerous to Life and Health is the concentration that has been determined by the ACGIH to cause serious health problems or death if exposed to this level. The IDLH for H2S is 100 PPM.

D. TWA – Time Weighted Average is the average concentration of any chemical or gas for an eight (8) hour period. This is the concentration that any employee may be exposed to based on an TWA.

TABLE II

Toxicity Table of H2S

Percent %	PPM	Physical Effects
.0001	1	Can smell less than 1 ppm.
.001	10	TLV for 8 hours of exposure
.0015	15	STEL for 15 minutes of exposure
.01	100	Immediately Dangerous to Life & Health. Kills sense of smell in 3 to 5 minutes.
.02	200	Kills sense of smell quickly, may burn eyes and throat.
.05	500	Dizziness, cessation of breathing begins in a few minutes.
.07	700	Unconscious quickly, death will result if not rescued promptly.
.10	1000	Death will result unless rescued promptly. Artificial resuscitation may be necessary.

PHYSICAL PROPERTIES OF H2S

The properties of all gases are usually described in the context of seven major categories:

COLOR
ODOR
VAPOR DENSITY
EXPLOSIVE LIMITS
FLAMMABILITY
SOLUBILITY (IN WATER)
BOILING POINT

Hydrogen Sulfide is no exception. Information from these categories should be considered in order to provide a fairly complete picture of the properties of the gas.

COLOR – TRANSPARENT
Hydrogen Sulfide is colorless so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence, a fact that makes the gas extremely dangerous to be around.

ODOR – ROTTEN EGGS
Hydrogen Sulfide has a distinctive offensive smell, similar to "rotten eggs." For this reason it earned its common name "sour gas." However, H2S, even in low concentrations, is so toxic that it attacks and quickly impairs a victim's sense of smell, so it could be fatal to rely on your nose as a detection device.

VAPOR DENSITY – SPECIFIC GRAVITY OF 1.192
Hydrogen Sulfide is heavier than air so it tends to settle in low-lying areas like pits, cellars or tanks. If you find yourself in a location where H2S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

EXPLOSIVE LIMITS – 4.3% TO 46%
Mixed with the right proportion of air or oxygen, H2S will ignite and burn or explode, producing another alarming element of danger besides poisoning.

FLAMMABILITY
Hydrogen Sulfide will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO2), another hazardous gas that irritates the eyes and lungs.

SOLUBILITY – 4 TO 1 RATIO WITH WATER
Hydrogen Sulfide can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion and sludge. The solubility of H2S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H2S may release the gas into the air.

BOILING POINT – (-76 degrees Fahrenheit)
Liquefied Hydrogen Sulfide boils at a very low temperature, so it is usually found as a gas.

LOCATION MAP – COTTONWOOD 29-32 FEDERAL COM #1H

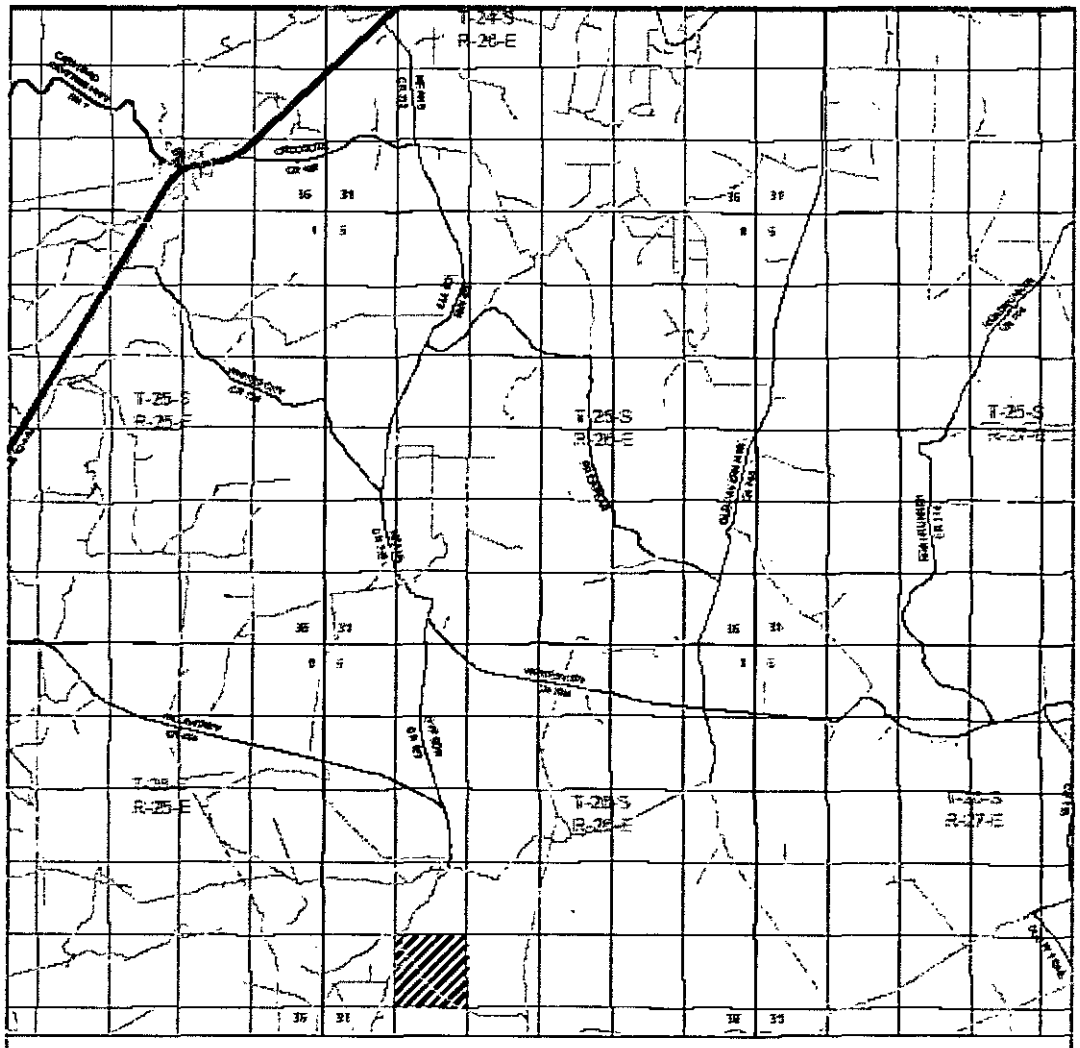
COTTONWOOD 29-32 FEDERAL COM 1H
Located 150' FNL and 1120' FWL
Section 29, Township 26 South, Range 26 EAST,
N.M.P.M., Eddy County, New Mexico.

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

0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'
W.O. Number: KAN 31724
Survey Date: 08-10-2015
YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

NEARBURG PRODUCING CO.

VICINITY MAP – COTTONWOOD 29-32 FEDERAL COM #1H



COTTONWOOD 29-32 FEDERAL COM 1H
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SCALE: 1" = 2 MILES
W.O. Number: KAN 31724
Survey Date: 08-10-2015
YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

NEARBURG PRODUCING CO.

NEARBURG PRODUCING COMPANY
SURFACE USE AND OPERATIONS PLAN
Cottonwood 29-32 Federal Com #1H
SHL: 150' FNL & 1120' FWL, Unit D
Sec 29, T-26S, R-26E
BHL: 330' FSL & 660' FWL, Lot 4
Sec 32, T26S, R26E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above-described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operations so that a complete appraisal can be made of the environmental effect associated with the operations.

1. **EXISTING AND PLANNED ROADS**

EXISTING ROADS:

a. The well site and elevation plat for the proposed well are reflected on Exhibit A Form C-102: Well Location and Acreage Dedication Plat. The well was staked by Basin Surveys. Paul Murphy, BLM Natural Resource Specialist, conducted the on-site inspection on April 15, 2015. Robert Gomez, BLM Realty Specialist, also attended the on-site inspection.
b. Exhibit C-1—C-2 is a plat and portion of a topo map and an aerial map showing the proposed well site and roads in the vicinity of the proposed location. Access to the well site will be via existing and new caliche roads and two-track lease roads.

DIRECTIONS:

From the intersection of Gypsum and Dillahunty Road, go south on Dillahunty 1.2 miles to lease road. Continue 1.2 miles southerly to proposed lease road.

PLANNED ACCESS ROAD:

Exhibits B-1 – B-4 are plats showing the proposed well pad and a proposed access road from the proposed Cottonwood 28-33 Federal #1H well pad in Sec 28, T-26S, R-26E to the southeast edge of the proposed Cottonwood 29-32 Federal Com #1H and #2H well pad.

a. The maximum width of the running surface will be 14'. The road will be crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4' wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and be consistent with local drainage patterns.
b. The average grade will be less than 1%.
c. No turnouts are planned.
d. No culverts, gates, fence cuts, or low water crossings.
e. Surfacing material will consist of native caliche which will be obtained from the actual well site if available. If not available on site, caliche will be hauled from the nearest BLM caliche pit.

2. **LOCATION OF EXISTING WELLS**

Exhibit D is a one-mile radius map.

3. **LOCATION OF EXISTING/PROPOSED FACILITIES**

If the well is productive, Nearburg Producing Company will install a flowline alongside the lease road to the proposed Cottonwood 29-32 Federal Com #3H and #4H tank battery.

4. **LOCATION AND TYPE OF WATER SUPPLY**

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from commercial water stations in the area and hauled to the location by transport truck using the existing and proposed roads shown in Exhibit B-2 and C-1.

If a commercial fresh water source is nearby, fast line may be laid along existing road ROWs and fresh water pumped to the well. No water well will be drilled on the location.

5. **SOURCE OF CONSTRUCTION MATERIALS**

If possible, native caliche will be obtained from the excavation of drill site. The primary way of obtaining caliche will be by "turning over" the location. This means caliche will be obtained from the actual well site. A caliche permit will be obtained from the BLM prior to pushing up any caliche. The maximum needed for well pad and access road is 2400 (±) cubic yards. The procedure below has been approved by BLM personnel:

a. The top six inches of topsoil is pushed off and stockpiled along the south side of the location.
b. An approximate 120' x 120' area is used within the proposed well site to remove caliche.
c. Subsoil is removed and piled alongside the 120' x 120' area within the pad site.
d. When caliche is found, material will be stockpiled within pad site to build location and road.
e. Subsoil is then pushed back in the hole and caliche is spread across entire location and road.
f. When well is drilled, stockpiled topsoil will be used for interim reclamation and spread along areas where caliche is picked up if location size is reduced. Neither caliche nor subsoil will be stockpiled outside of the well pad. Topsoil will be piled along the edge of the pad as depicted in Exhibit G.

6. **METHODS OF HANDLING WASTE MATERIAL**

a. The well will be drilled using a closed loop system as depicted in Exhibit G.
b. Drilling fluids will be contained in steel mud pits.
c. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD-approved commercial disposal facility.
d. Oil produced during testing will be stored in test tanks.
e. Portable toilets will be furnished and serviced by a toilet rental company, and laws and regulations pertaining to the disposal of human waste will be complied with.
f. All trash and debris will be contained in trash bins and will be removed from well site within 30 days after finishing drilling and/or completion activities.

7. **ANCILLARY FACILITIES**

No campsite or other facilities will be constructed as a result of this well.

8. **WELL SITE LAYOUT**

a. Exhibit G shows the proposed well site layout with dimensions of the pad layout. The well pad size is 300' x 300'.
b. The V Door direction is east.
c. Topsoil, if available, will be stockpiled on the south side of the location until it is needed for reclamation.
d. No permanent living facilities are planned, but a temporary foreman/tool pusher's trailer will be on location during the drilling operations.

9. **PLANS FOR SURFACE RECLAMATION**

a. The operator plans to drill an additional well to the east adjoining the proposed well pad. Therefore, no interim reclamation is planned at this time. Any portion of the site that is not needed for future production operations will be re-contoured to the original state as much as possible. The caliche that is removed will be reused to either build another pad site or for road repairs within the lease. If an area is reclaimed, any stockpiled topsoil will be spread over reclaimed area and reseeded with a BLM-approved seed mixture. Nearburg Producing Company will notify the BLM and receive approval (via Form 3160-5) before initiating interim reclamation.
b. Final reclamation will take place if the well is not productive. Upon plugging and abandoning the well, all caliche will be removed from the well pad and access road, and surface will be contoured to match the original topography as much as possible. Caliche

will be recycled for road repair or reused for another well pad on the same lease. If any topsoil remains, it will be spread out and reseeded with a BLM-approved seed mixture.

10. **SURFACE OWNERSHIP**
    a. The surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface has multiple uses, primarily grazing of livestock and oil and gas production.
    b. The surface tenant for this site is David or Laverne Maley, P.O. Box 519, Carlsbad, NM 88221.
11. **OTHER INFORMATION**
    Topography consists of a sloping plane with loose, tan sands. Vegetation consists of yucca, mesquite; and shin oak. An Archaeological Survey is scheduled, and upon completion, a report will be provided to the BLM.
12. **BOND COVERAGE:** NM2163
13. **OPERATOR'S REPRESENTATIVE:**

a. **Through APD Approval**:
Vicki Johnston, Regulatory Specialist
Gray Surface Specialties, Agent for
Nearburg Producing Company
3416 W. Wall St., Suite 100
Midland, TX 79701
Phone: (830) 537-4599
Cell: (281) 468-2448

b. **Through Drilling Operations:**
Matt Lee, Drilling/Operations
Nearburg Producing Company
Artesia, NM
Phone: (575) 746-0422
Cell: (575) 365-6662

EXHIBITS

A	Form C-102 Well Location & Acreage Dedication Map
B-1 – B-4	Well Pad and Proposed Road Plats
C-1 – C-2	Vicinity Map (Topographical), Location Verification Map
D	One-Mile Radius Map
F-1 – F-2	BOP and Choke Manifold Diagram (for attachment to Drilling Program)
G	Proposed Well Pad Layout Map w/H2S and Facility Diagram

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Nearburg Producing Co
LEASE NO.:	NM113944
WELL NAME & NO.:	1H-Cottonwood 29 32 Federal Com
SURFACE HOLE FOOTAGE:	150'/N & 1120'/W
BOTTOM HOLE FOOTAGE	330'/S & 660'/W, sec. 32
LOCATION:	Section 29, T. 26 S., R.26 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)

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 power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

Range

1. Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. The operator shall notify the grazing allotment holder prior to crossing the fence or installing a cattleguard.

2. Surface flowlines shall be buried under all intersecting routes and roads. All buried crossings will be filled, compacted and reclaimed when the pipelines are removed.

3. When crossing a fence, surface flowlines will be laid under the bottom wire.

4. The company or contractors shall have in their immediate possession a copy of the approved APD while building well locations or installing pipelines and powerlines.

Karst

Construction Mitigation

In order to mitigate the impacts from construction activities on cave and karst resources, the following Conditions of Approval will apply to this APD:

1. In the event that any underground voids are encountered during construction activities, construction activities will be halted and the BLM will be notified immediately.
2. No Blasting is allowed to prevent geologic structure instabilities.
3. Pads shall be bermed to minimize effects of any spilled contaminates.
4. Pad 29-32 East will be fenced on the north side to ensure construction equipment does not impact karst resources near the pad.
5. Pad 29-32 West will be fenced. This fence will continue along the north side of the road/powerline/pipeline route for 500 feet east of the pad to ensure equipment does not impact karst resources near the pad. 2. Fencing will be required on the south side of the road/powerline/pipeline for 100 feet east and 100 feet west of the karst feature located at 564623.223, 3542894.286 in order to prevent impacts to a karst feature south of the road/powerline/pipeline. Fencing will be required on the north and south side of the road/powerline/pipeline for 100 feet east and 100 feet

west of the karst feature located near 564811.739, 3542908.838 to prevent impacts to karst features located north and south of the road/powerline/pipeline.
6. A monitor will be required during construction of the access road.
7. The total utility corridor width shall be 50 feet wide for the road, pipelines and powerline.
8. The road will be the northern most feature in the corridor, with the buried and surface pipelines adjacent to the road. The powerline shall be the southern most feature in the utility corridor.
9. To prevent any spills from leaving the pads, a two foot berm shall be built inside the fence on each pad.
10. Straw wattles shall be placed completely around the disturbed areas of all pads and along all fences to reduce erosion in this sensitive karst area.
11. Drainage turnouts shall have straw wattles installed.
12. Drainage turnouts along the access road shall not lead to sinkholes.

Drilling Mitigation

Federal regulations and standard Conditions of Approval applied to all APDs require that adequate measures are taken to prevent contamination to the environment. Due to the extreme sensitivity of the cave and karst resources in this project area, the following additional Conditions of Approval will be added to this APD.

To prevent cave and karst resource contamination the following will be required.

1. Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.
2. Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.
3. Directional Drilling allowed after at least 100 feet below the cave occurrence zone to prevent additional impacts resulting from directional drilling.
4. Lost Circulation zones logged and reported in the drilling report so BLM can assess the situation and work with the operator on corrective actions.
5. Additional drilling, casing, and cementing procedures to protect cave zones and fresh water aquifers. See Drilling COAs.

Production Mitigation

In order to mitigate the impacts from production activities and due to the nature of karst terrain, the following Conditions of Approval will apply to this APD:

1. Tank battery liners and berms to minimize the impact resulting from leaks.
2. Leak detection system to provide an early alert to operators when a leak has occurred.
3. Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of line failures used in production or drilling.

Residual and Cumulative Mitigation

1. Annual pressure monitoring will be performed by the operator. If the test results indicate a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

Plugging and Abandonment Mitigation

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.

Watershed

1. The proposed routes for both the powerline and surface flowlines will not be bladed.
2. Containment berms will be constructed around both tank battery production facilities designed to hold fluids. The containment berms will be constructed with compacted material capable of holding 1½ time the capacity of the largest tank.
3. Topsoil will be stockpiled on the pads to enhance future reclamation.
4. A closed loop drilling system will be used.
5. To prevent any spills from leaving the pads, a two foot berm shall be built inside the fence on each pad.
6. Straw wattles shall be placed completely around the disturbed areas of all pads and along all fences to reduce erosion in this sensitive karst area.
7. Drainage turnouts shall have straw wattles installed.
8. Drainage turnouts along the access road shall not lead to sinkholes.

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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.

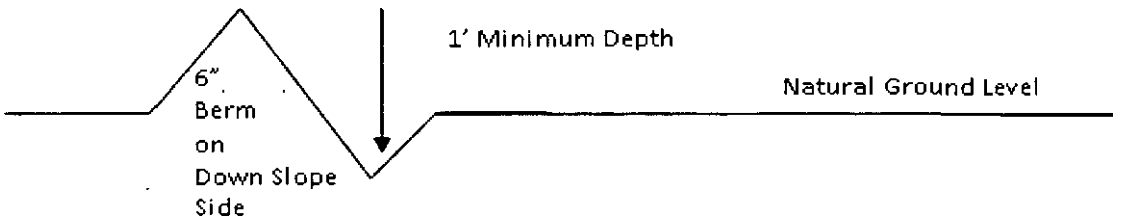
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

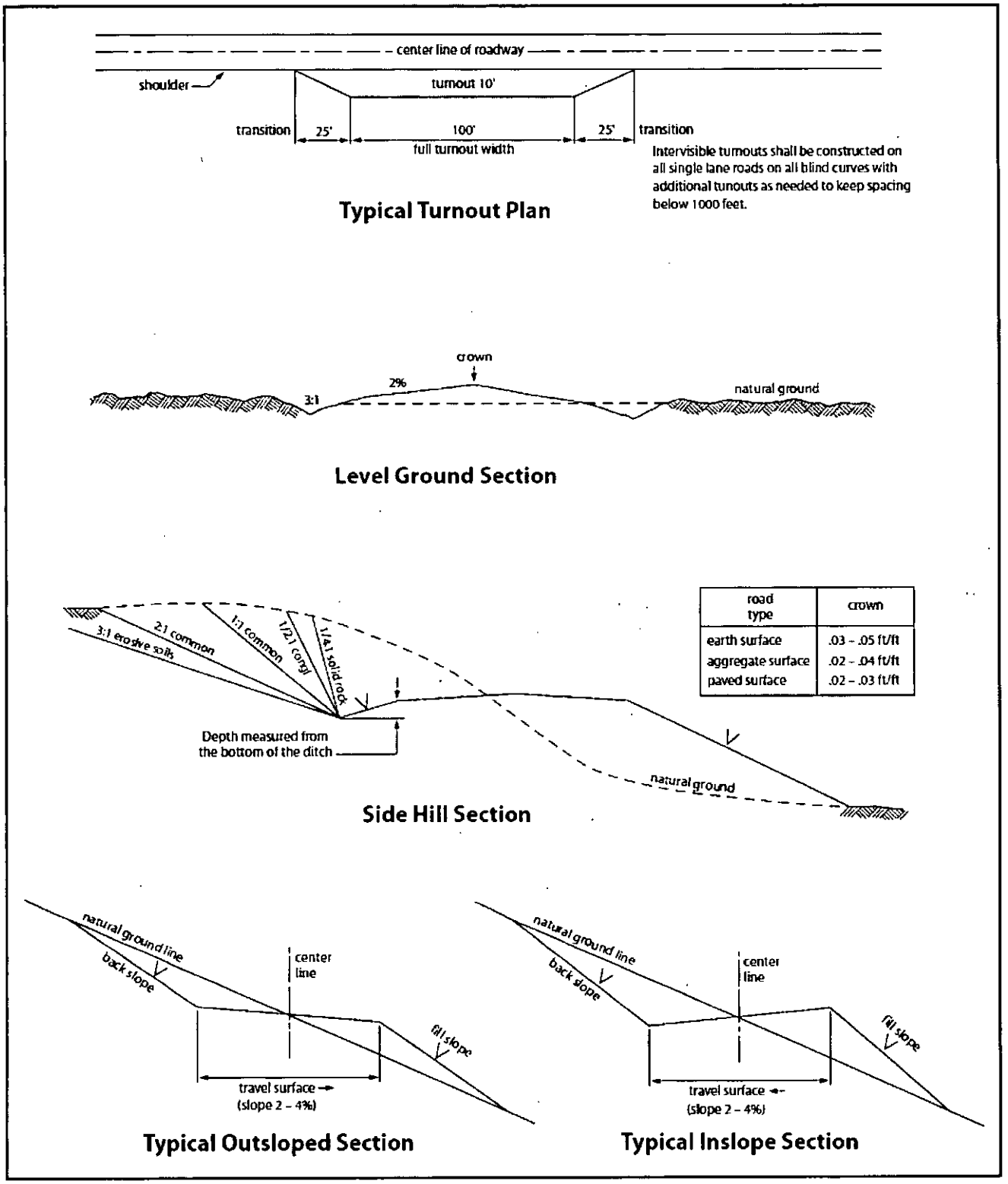


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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

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

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

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

B. CASING

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

prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

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

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

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

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

HIGH CAVE/KARST
A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. ON A THREE STRING DESIGN; IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.

1. The **13-3/8** inch surface casing shall be set at approximately **420** 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 **9-5/8** inch intermediate casing is: **(Ensure casing is set in the base of the Castille or the Lamar at approximately 1600')**

☒ 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.**

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

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, contact the appropriate BLM office. **Excess calculates to negative 13% - Additional cement will 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 RP 53 Sec. 17.

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.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M)** psi.

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

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

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

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 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.

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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
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.

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

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

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

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic

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

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

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

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

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

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

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

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

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

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

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

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

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

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

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

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

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

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

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

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

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

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

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 4, for Gypsum 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
Alkali Sacaton (*Sporobolus airoides*)	1.0
DWS Four-wing saltbush (*Atriplex canescens*)	5.0

DWS: DeWinged Seed

*Pounds of pure live seed:

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