

# Carlsbad Field Office OCD Artesia

ATS-15-388  
FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

Form 3160-3  
(March 2012)

## HIGH CAVEKARST

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

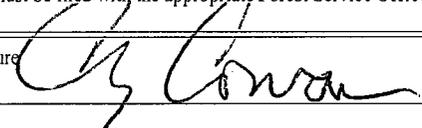
### APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. N/A
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. Blast BLA Federal #7H
2. Name of Operator YATES PETROLEUM CORPORATION		9. API Well No. 30-015-43904
3a. Address 105 South Fourth Street Artesia, New Mexico 88210	3b. Phone No. (include area code) 575-748-4347	10. Field and Pool, or Exploratory <del>Undesignated 2nd Bone Spring</del>
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 2150' FSL & 15' FWL, Unit Ltr L Sec. 21, T26S-R27E At proposed prod. zone 1980' FSL & 330' FEL, Unit Ltr I Sec. 21, T26E-R27E		11. Sec., T. R. M. or Blk. and Survey or Area Section 21, T26S-R27E
14. Distance in miles and direction from nearest town or post office* Approximately 25 miles southwest of Malaga, NM		12. County or Parish Eddy
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 15'		13. State NM
16. No. of acres in lease 1,920.00		17. Spacing Unit dedicated to this well N/2S/2
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 30'		20. BLM/BIA Bond No. on file Nation Wide Bond 000434 Individual Bond NMB 000920
19. Proposed Depth 7620' TVD and 12245' MD		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3248' GL
22. Approximate date work will start* 06/01/2015		23. Estimated duration 60 days

#### 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature 	Name (Printed/Typed) Cy Cowan	Date 8/4/15
Title Land Regulatory Agent		
Approved by (Signature) /s/George MacDonell	Name (Printed/Typed)	Date AUG 26 2016
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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

**APPROVAL FOR TWO YEARS**

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

(Continued on page 2)

**NM OIL CONSERVATION**  
ARTESIA DISTRICT  
SEP 06 2016

Carlsbad Controlled Water Basin

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

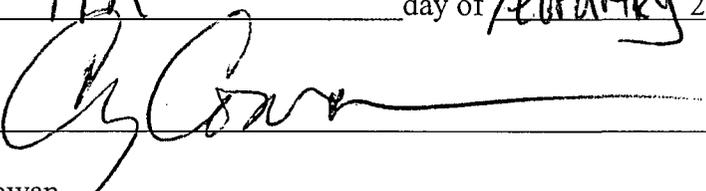
RECEIVED

Approval Subject to General Requirements  
& Special Stipulations Attached

CERTIFICATION  
YATES PETROLEUM CORPORATION  
Blast BLA Federal #7H

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; and an someone under employment of Yates Petroleum Corporation has full knowledge of state and federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 4th day of February 2015

Signature 

Name Cy Cowan

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

Telephone (575) 748-4372

Field Representative (if not above signatory) Tim Bussell, Drilling Supervisor

Address (if different from above) Same as above.

Telephone (if different from above) (575) 748-4221

E-mail (optional) cy@yatespetroleum.com

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) 746-1283 Fax: (575) 746-9720

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone (505) 384-6178 Fax: (505) 384-6170

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone (505) 478-3460 Fax: (505) 478-3462

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised August 1, 2011

Submit one copy to appropriate  
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number <b>30-015-43904</b>	Pool Code <b>64010</b>	Pool Name <b>Walch, Undesignated Bone Spring</b>
Property Code <b>37020</b>	Property Name <b>BLAST BLA FEDERAL</b>	Well Number <b>7H</b>
OGRID No. <b>025575</b>	Operator Name <b>YATES PETROLEUM CORPORATION</b>	Elevation <b>3248</b>

Surface Location

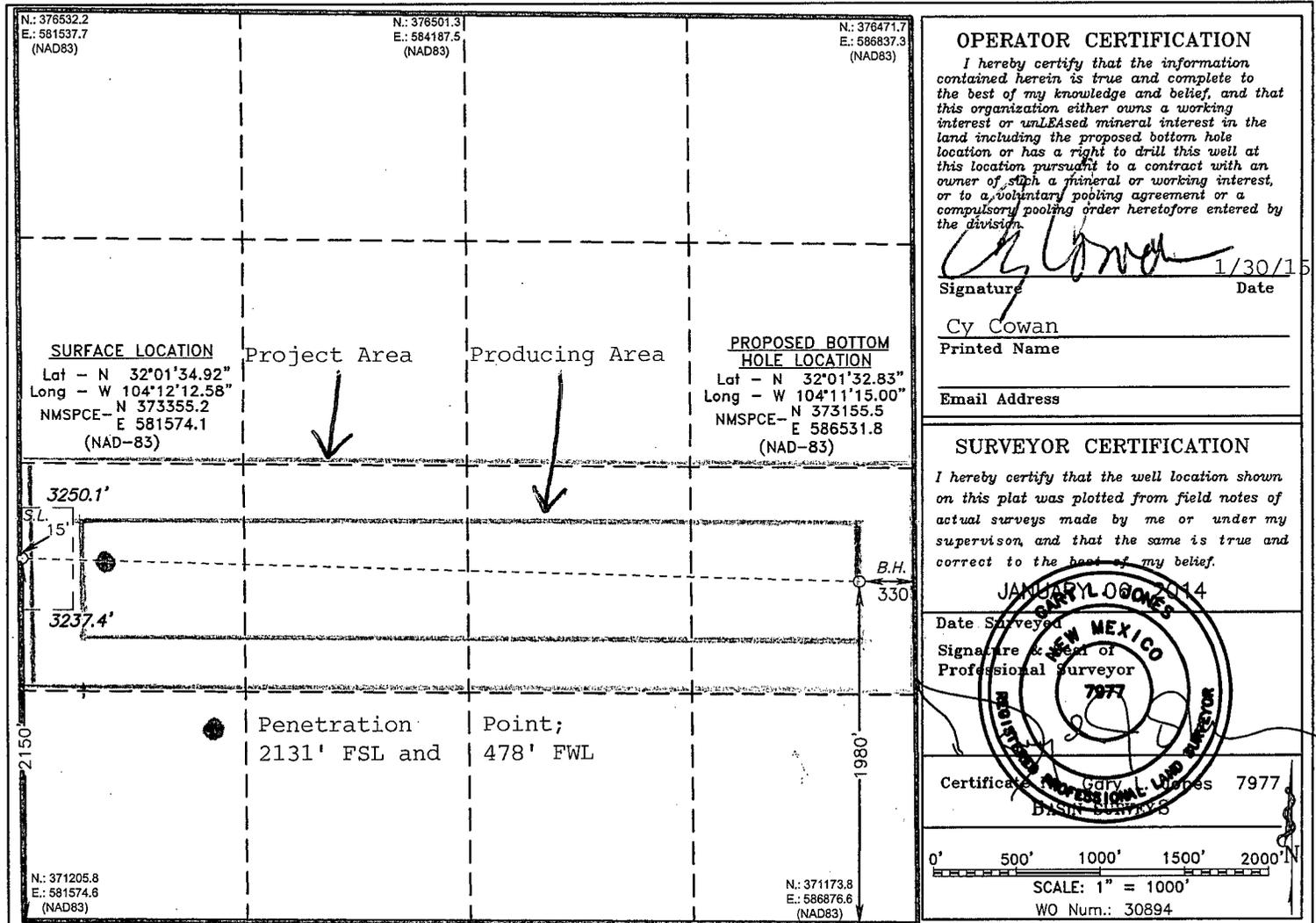
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
L	21	26 S	27 E		2150'	SOUTH	15'	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
I	21	26 S	27 E		1980'	SOUTH	330'	EAST	EDDY

Dedicated Acres <b>160</b>	Joint or Infill	Consolidation Code	Order No.
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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

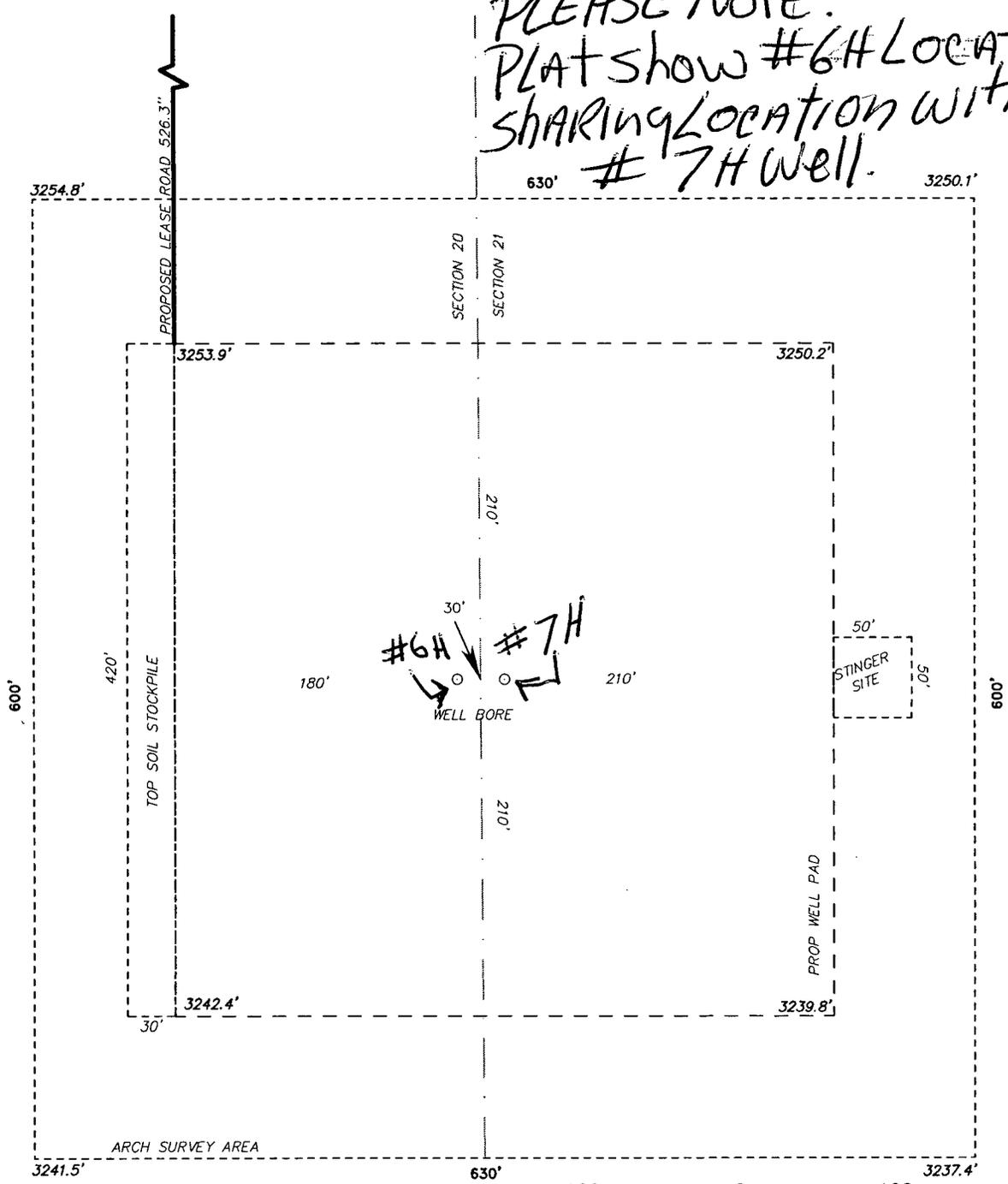




① Exhibit A'

SECTION 21, TOWNSHIP 26 SOUTH, RANGE 27 EAST. N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

PLEASE Note:  
PLAT show #6H LOCATION  
SHARING LOCATION WITH  
# 7H WELL.

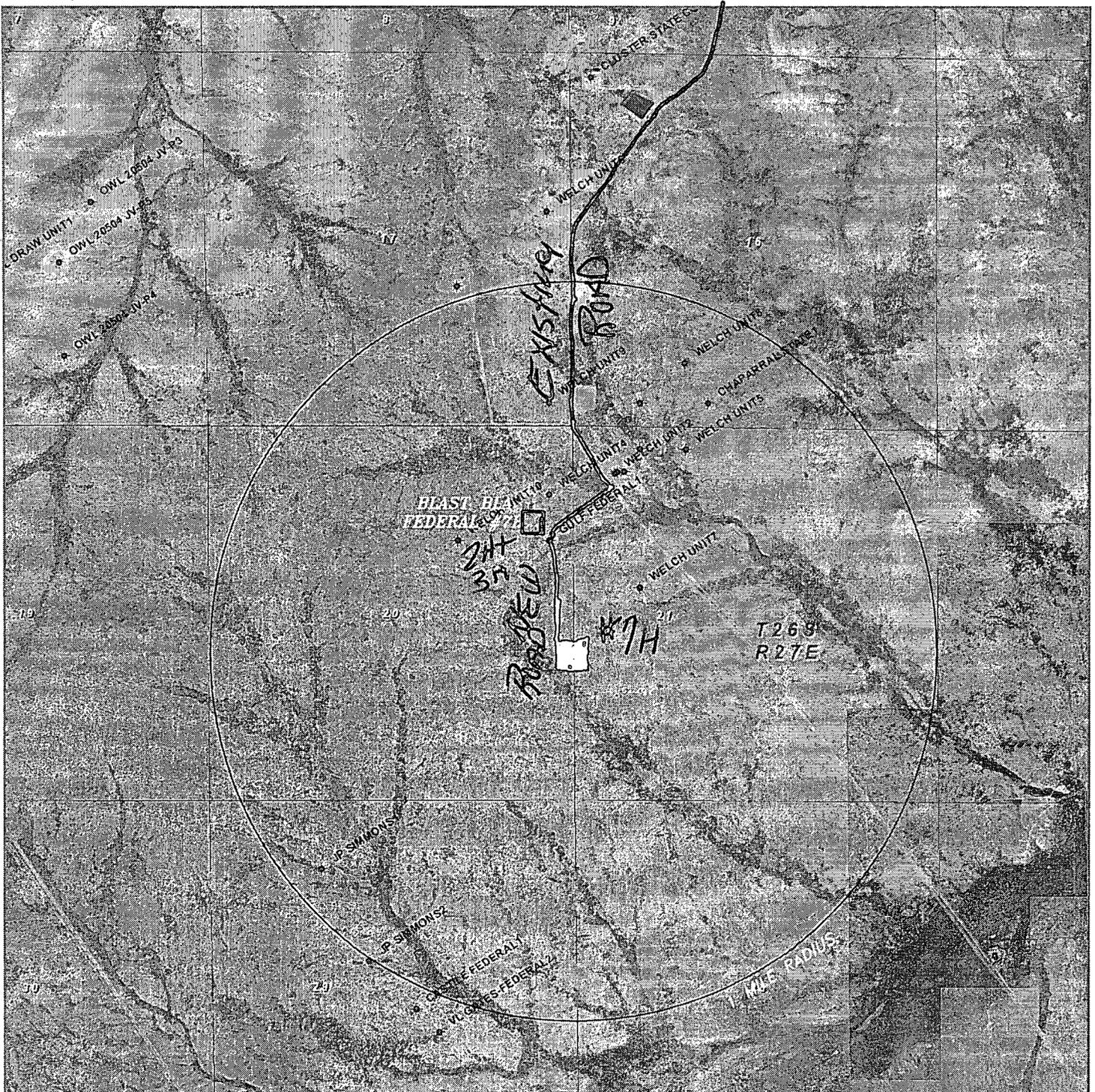


P.O. Box 1786 (575) 393-7316 - Office  
1120 N. West County Rd. (575) 392-2206 - Fax  
Hobbs, New Mexico 88241 basinsurveys.com



REF: BLAST BLA FEDERAL #7H / WELL PAD TOPO  
THE BLAST BLA FEDERAL #7H LOCATED 2150' FROM  
THE SOUTH LINE AND 15' FROM THE WEST LINE OF  
SECTION 21, TOWNSHIP 26 SOUTH, RANGE 27 EAST.  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

1



BLAST BLA FEDERAL #7H  
 Located 2150' FSL and 15' FWL  
 Section 21, Township 26 South, Range 27 East,  
 N.M.P.M., Eddy County, New Mexico.

Exhibit A-2

**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' 1500'

SCALE: 1" = 2000'

W.O. Number: KAN 30894

Survey Date: 01-06-2014

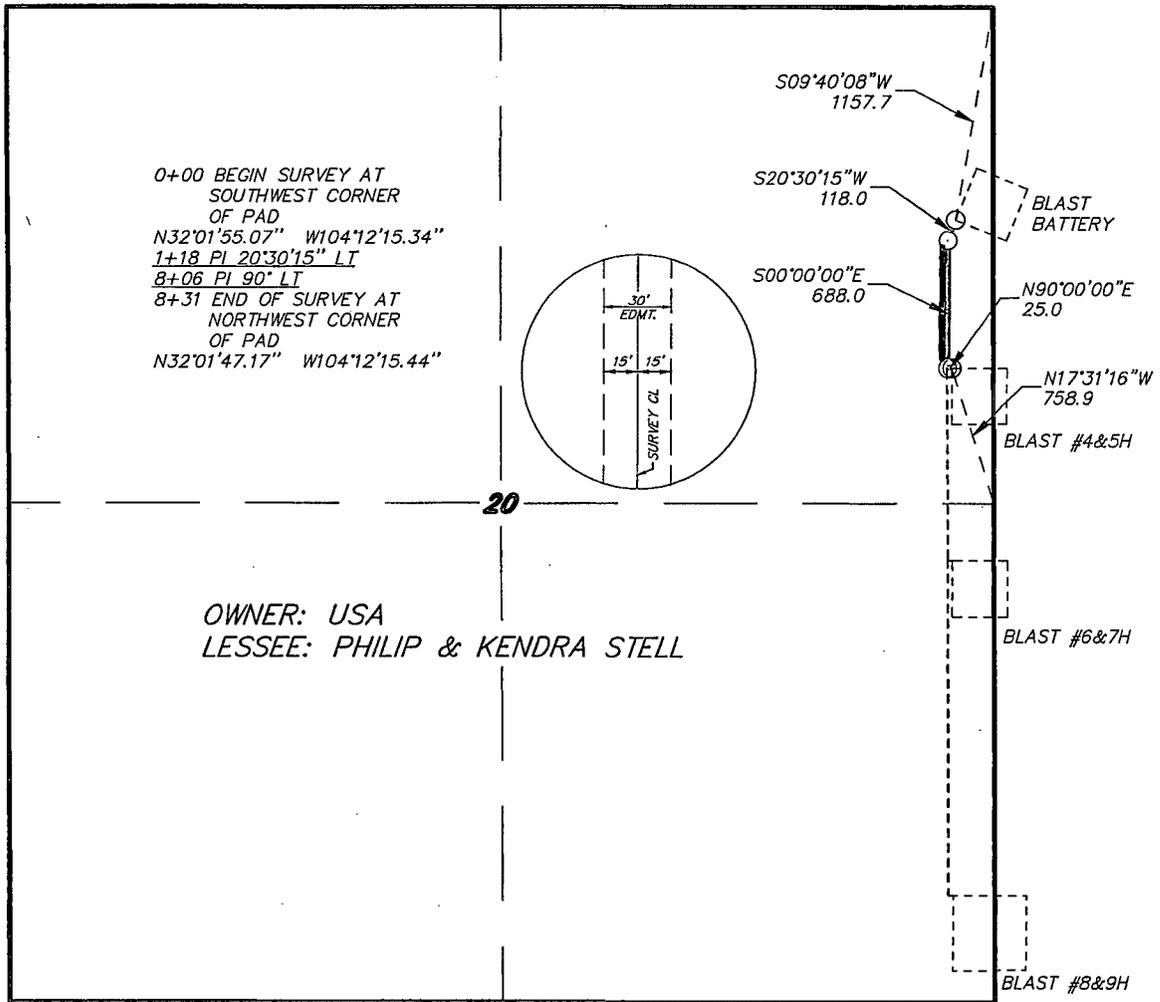
YELLOW TINT - USA LAND  
 BLUE TINT - STATE LAND  
 NATURAL COLOR - FEE LAND

**GATES**  
 PETROLEUM  
 CORPORATION



①

SECTION 20, TOWNSHIP 26 SOUTH, RANGE 27 EAST. N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



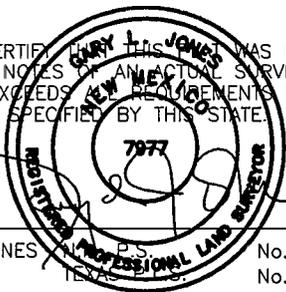
LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 20, TOWNSHIP 26 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

831.0 FEET = 0.16 MILES = 50.36 RODS = 0.57 ACRES

Exhibit B-1

I HEREBY CERTIFY THAT THIS SURVEY 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  
No. 5074

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basinsurveys.com

1000 0 1000 2000 FEET



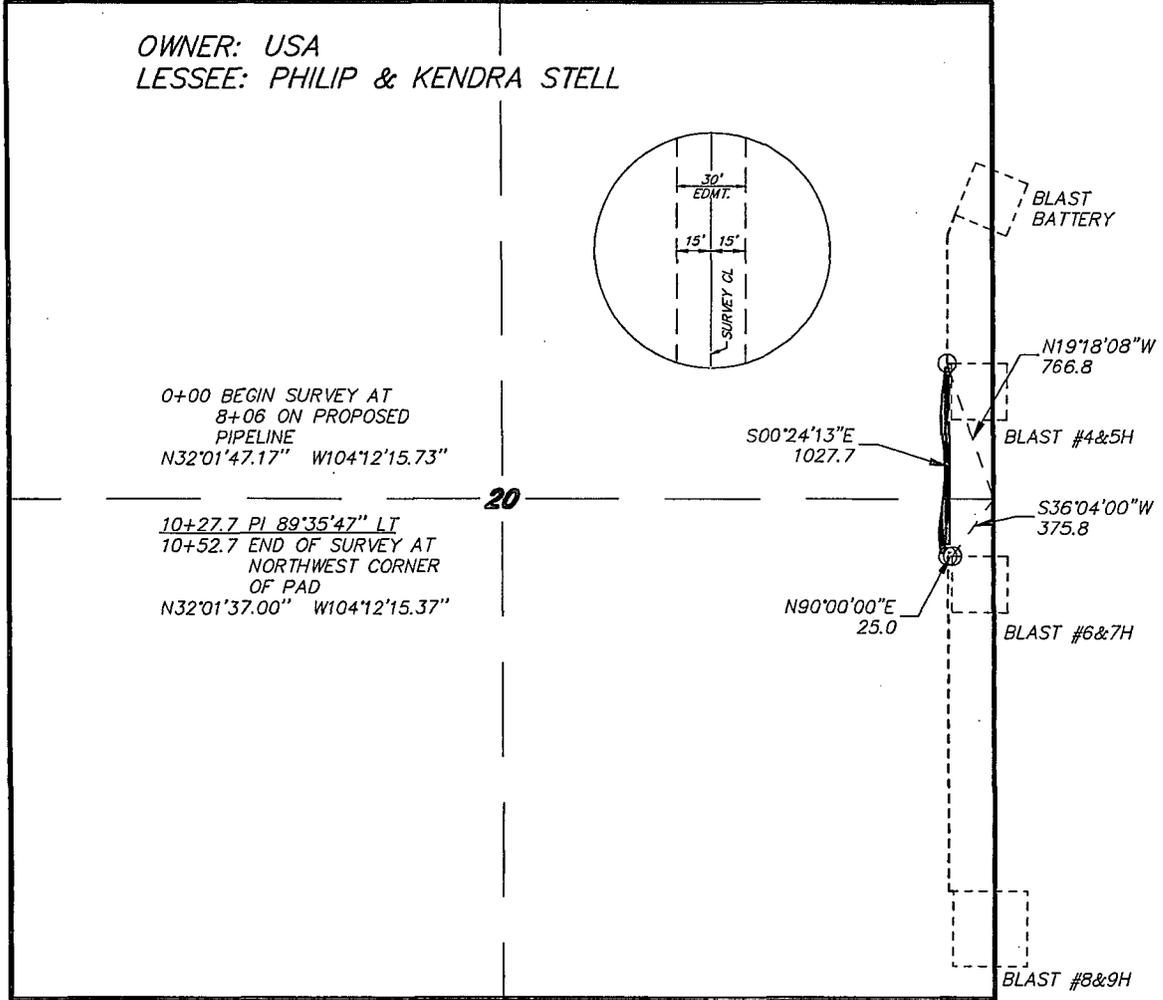
REF: PROP BLAST FLOW LINE

A PIPELINE LOCATED ON USA LAND IN  
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 27 EAST.  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

1

SECTION 20, TOWNSHIP 26 SOUTH, RANGE 27 EAST. N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

OWNER: USA  
LESSEE: PHILIP & KENDRA STELL



0+00 BEGIN SURVEY AT  
8+06 ON PROPOSED  
PIPELINE  
N32°01'47.17" W104°12'15.73"

10+27.7 PI 89°35'47" LT  
10+52.7 END OF SURVEY AT  
NORTHWEST CORNER  
OF PAD  
N32°01'37.00" W104°12'15.37"

20

S00°24'13"E  
1027.7

N90°00'00"E  
25.0

BLAST BATTERY

N19°18'08"W  
766.8

BLAST #4&5H

S36°04'00"W  
375.8

BLAST #6&7H

BLAST #8&9H

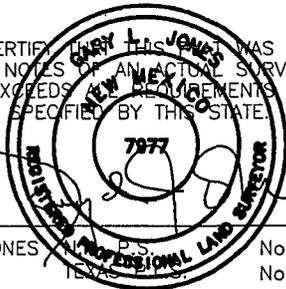
LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 20, TOWNSHIP 26 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

1052.7 FEET = 0.20 MILES = 63.80 RODS = 0.72 ACRES

Exhibit B-2

I HEREBY CERTIFY THAT THIS SURVEY 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  
No. 5074

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in the oilfield

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



REF: PROP BLAST FLOW LINE

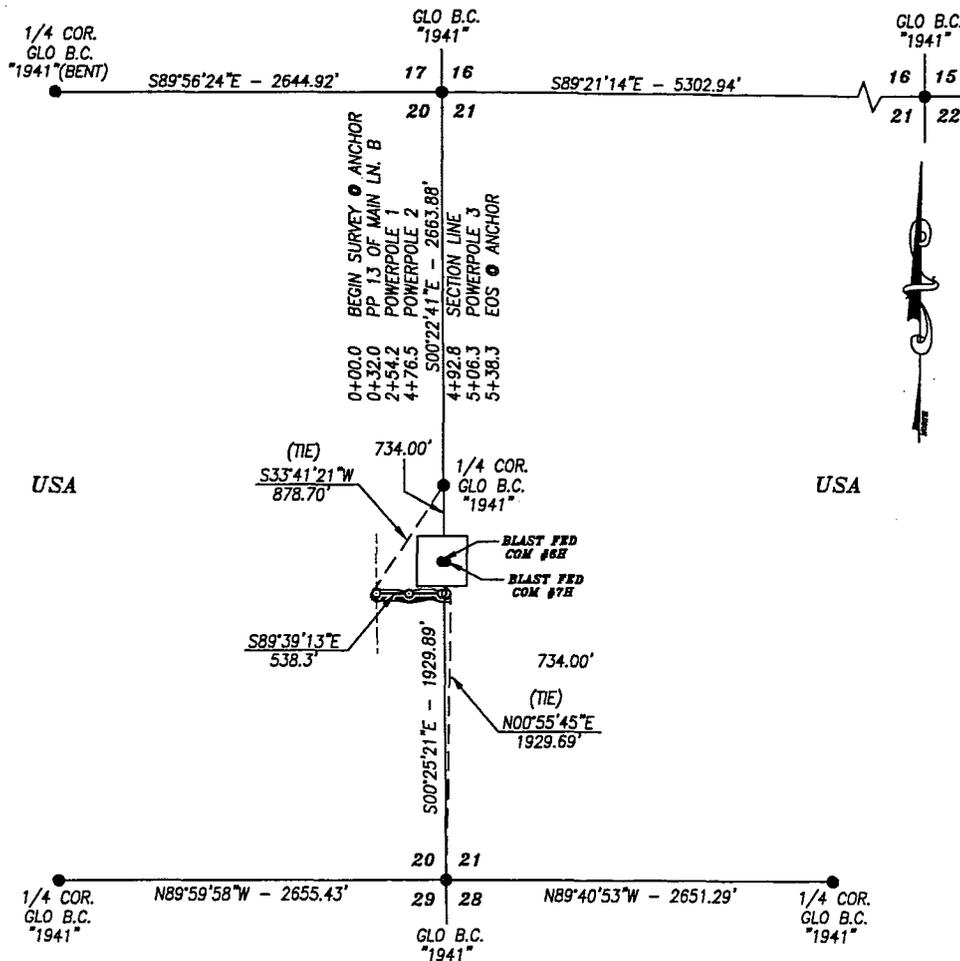
A PIPELINE LOCATED ON USA LAND IN  
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 27 EAST.  
N.M.P.M., EDDY COUNTY, NEW MEXICO.







SECTIONS 20 & 21, TOWNSHIP 26 SOUTH, RANGE 27 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE AND 538.3 FEET OR 32.62 RODS OR 0.102 MILES IN LENGTH CROSSING USA LAND IN SECTIONS 20 & 21, TOWNSHIP 26 SOUTH, RANGE 27 EAST, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

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

**HARCROW SURVEYING, LLC**  
2314 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 513-2570 FAX: (575) 746-2158  
chad\_harcrow77@yahoo.com

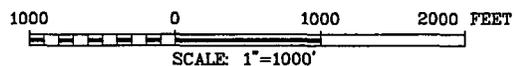


**CERTIFICATION**  
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

9/8/14  
DATE



<b>YATES PETROLEUM CORP.</b>	
SURVEY OF A PROPOSED POWERLINE LOCATED IN SECTIONS 20 & 21, TOWNSHIP 26 SOUTH, RANGE 27 EAST, EDDY COUNTY, NMPM, NEW MEXICO	
SURVEY DATE: AUGUST 22, 2014	LATERAL 3B
DRAFTING DATE: AUGUST 29, 2014	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: SP
	FILE: 14-739

**YATES PETROLEUM CORPORATION**

**Blast "BLA" Federal #7H**  
 2150' FSL & 15' FWL, Surface  
 1980' FSL & 330' FEL, Bottom  
 Section 21-T26S-R27E  
 Eddy County, New Mexico

**1. The estimated tops of geologic markers are as follows:**

Castile/LM/SD	264'	Bone Spring LM	5620'	
Top of Salt	1204'	Avalon Shale	5756'--Oil	
Base of Salt	1860'	Bone Spring 1/SD/	6536'--Oil	
Lamar	2002'	Kick Off Point	7011'	
Bell Canyon	2044'--Oil	Bone Spring 2/SD/	7275'--Oil	7262' TVD
Cherry Canyon	2858'--Oil	Bone Spring 2 Target	7747'--Oil	7488' TVD
Manzanita Marker	2993'	TD EOL	12245'	7620' TVD
Brushy Canyon	4018'--Oil			

**2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:**

Water: Approx 400'

Oil or Gas: See above.

**3. Pressure Control Equipment:** 3000 PSI BOPE with a 13.625" opening will be installed on the 13 3/8" and a 5000# BOP with a minimum opening of 11.0 opening on the 9 5/8" casing. A variance is requested for the use of a flex hose between the well head and manifold if Cactus Rig #124 is used to drill this well. The certification and specs are attached. Test will be conducted by an independent tester, utilizing a test plug in the well head. 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 on each segment of the system tested if test is done with a test plug and 30 minutes without a test plug. Blind rams and pipe rams will be tested to the rated pressure of the BOP. Any leaks will be repaired at the time of the test. Annular preventers will be tested to 50% of rated pressure. Accumulator system will be inspected for correct pre charge pressures, and proper functionality, prior to connection to the BOP system. Tests will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

*See COA*

**Auxiliary Equipment:**

A. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

**4. The proposed Casing and Cementing Program:**

A. Casing Program: (All New)

HOLE SIZE	CASING SIZE	WT./FT.	GRADE	COUPLING	INTERVAL	LENGTH
17.5"	13.375"	48#	J-55/K-55 Hybrid	ST&C	0'-400'	400'
12.25"	9.625"	36#	J-55	LT&C	0'-2100'	2100'
8.75"	5.5"	17#	P-110	Buttress	0'-7747'	7747'
8.5"	5.5"	17#	P-110	Buttress	7747'-12245'	4498'

This well will be drilled vertically to 7011'. At 7011' the well will be kicked off and directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 7747' MD (7498' TVD). Hole size will then be reduced to 8 1/2" and drilled to 12245' MD (7620' TVD) where 5 1/2" casing will be set and cemented 500' into intermediate casing in a single stage. Penetration point of producing zone will be encountered at 2131' FSL and 478' FWL of section 21-26S-27E. The deepest TVD in well will be 7620' in the lateral.

Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Joint Strength 1.8

**B. Cementing Program:**

Surface casing from 0' to 400': TOC surface; Lead with 415 sack Class "C" with 2% CaCl2 (WT 14.80 YLD 1.34 WTR. 6.20 gal/sack). Cement designed with 100% excess.

Intermediate Casing 0' to 2100': TOC surface. Lead with 510 sack 35:65:6PzC (WT 12.50 YLD 2.00 WTR. 11.0 gal/sack); Tail in w/ 210 sack 50/50 PozC with 2% CaCl2 (Wt 14.20 Yld.1.34 WTR. 6.20 gal/sack). Cement designed with 100% excess.

Production Casing 1600' to 12245': Lead in with 625 sacks Lite Crete with (WT 9.00 WT 2.73 WTR 8.98 gal/sack) with D-177 Retarder .03 gal/sack; D-046 Anti Foam .2%; D-065 Dispersant.1%, D-124 Extender 39 lb per sack. Tail with 1530 sacks PecosVILt (Wt 13.50 Yld 1.30 WTR 6.10) with D112 fluid loss 0.4%, D151-Calcium Carbonate 22.5 lbs/sack, D174-Extender 2.5 lb/sack, D177-Retarder 0.01 lb/sack, D800-Retarder 0.6 lb/sack, D046-antifoam agent 0.15 lb/sack D042 LCM Extender 3 lb/sack, D044 Salt 1%, D130 LCM .125 per sack, D 167 Fluid Loss Material 2.0%. Cement designed with 35% excess.

A variance is requested for the use of a flex hose if Cactus Rig #124 is used to drill this well. Certification and specs are attached.

**5. Mud Program and Auxiliary Equipment:**

INTERVAL	TYPE	WEIGHT	VISCOSITY	FLUID LOSS
0'-400'	Fresh Water	8.60-9.20	32-34	N/C
400'-2100'	Brine Water	10.00-10.20	28-29	N/C
2100'- <del>12245'</del> 12,245'	Cut Brine	8.80-9.20	28-32	N/C

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. The slow pump speed will be recorded on the daily drilling report after mudding up. A mud test will be performed every 24 hours after mudding up to determine, as applicable, viscosity, gel strength, filtration and pH. After surface casing is set an electronic PVT system will be installed as our primary mud level monitoring system. A secondary system will also be implemented as to insure the PVT system is functioning properly. The secondary system will be comprised of the derrick hand visually checking the fluid level in the pits periodically using a nut on the end of a rope hanging just above the fluid level in the pit.

**6. EVALUATION PROGRAM:**

*See COA*

Samples: 10' samples to TD.

Logging: Gamma-Ray/Neutron, 30 degree deviation to surface. Neutron Density, 30 degree deviation to intermediate casing. Laterolog, 30 degree deviation to intermediate casing. CMR, 30 degree deviation to intermediate casing. Horizontal-MWD-GR.

Coring: None Anticipated.  
DST's: As warranted.  
Mudlogger on from surface casing to TD.

H2S is not anticipated.

**7. Abnormal Conditions, Bottom hole pressure and potential hazards:**

Anticipated BHP:

From: 0	TO: 400'	Anticipated Max.	BHP: 191	PSI
From: 400'	TO: 2100'	Anticipated Max.	BHP: 1114	PSI
From: 2100'	TO: 7620'	Anticipated Max.	BHP: 3645	PSI

*See  
COA*

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: None.

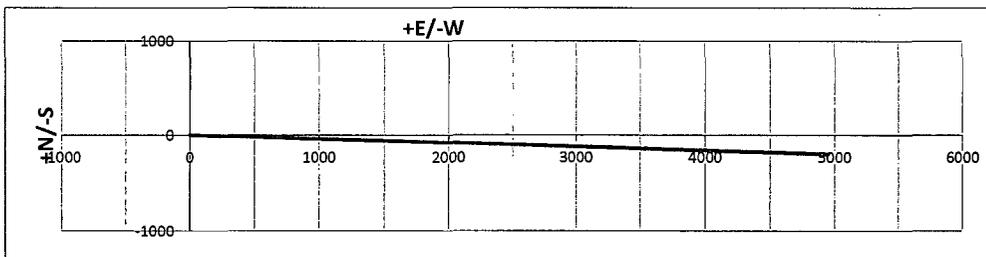
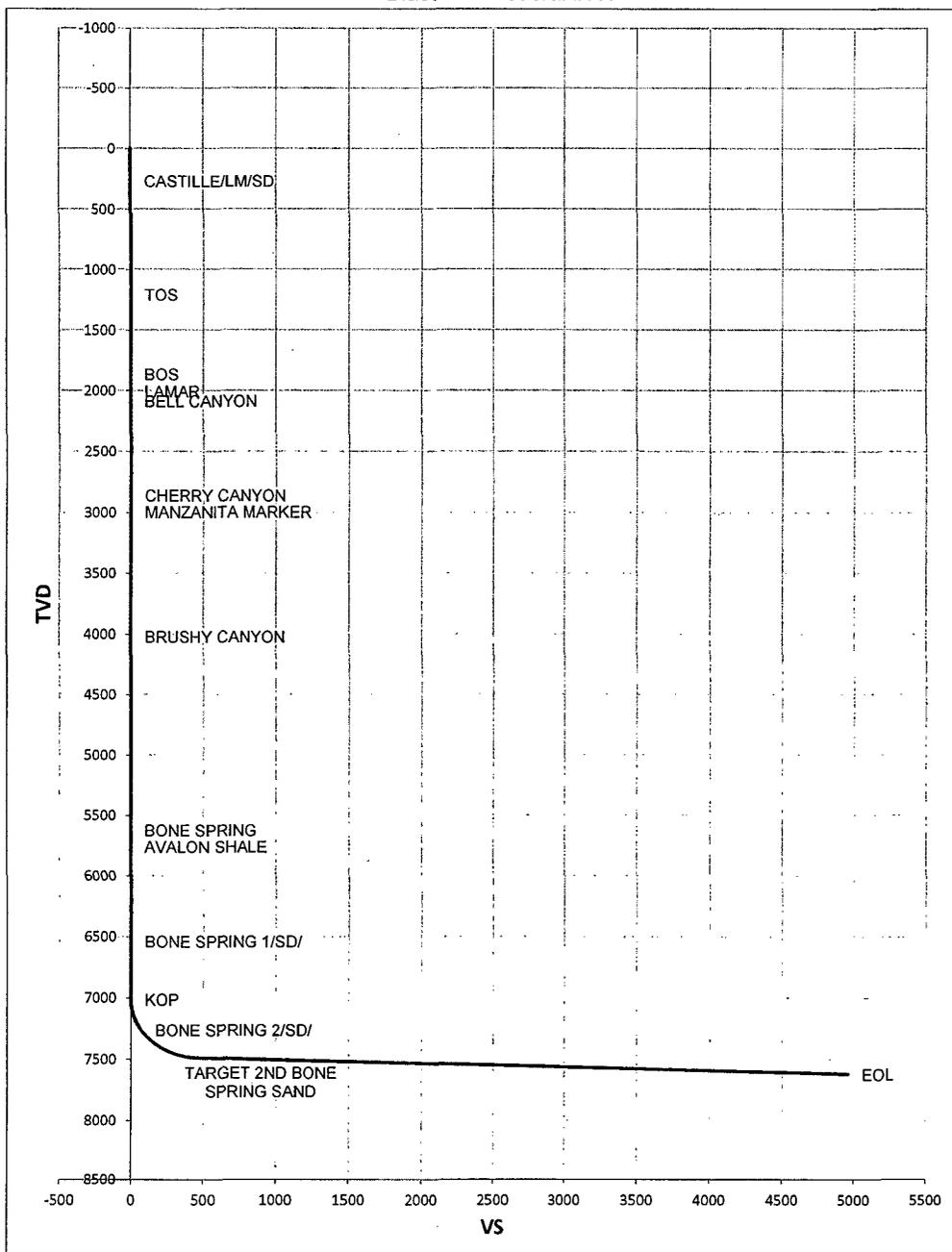
H2S Zones Anticipated: None

Maximum Bottom Hole Temperature: 160 F

**8. ANTICIPATED STARTING DATE:**

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 60 days to drill the well with completion taking another 30 days.

Blast BLA Federal #7H



M12653

### Internal Hydrostatic Test Graph

December 11, 2013

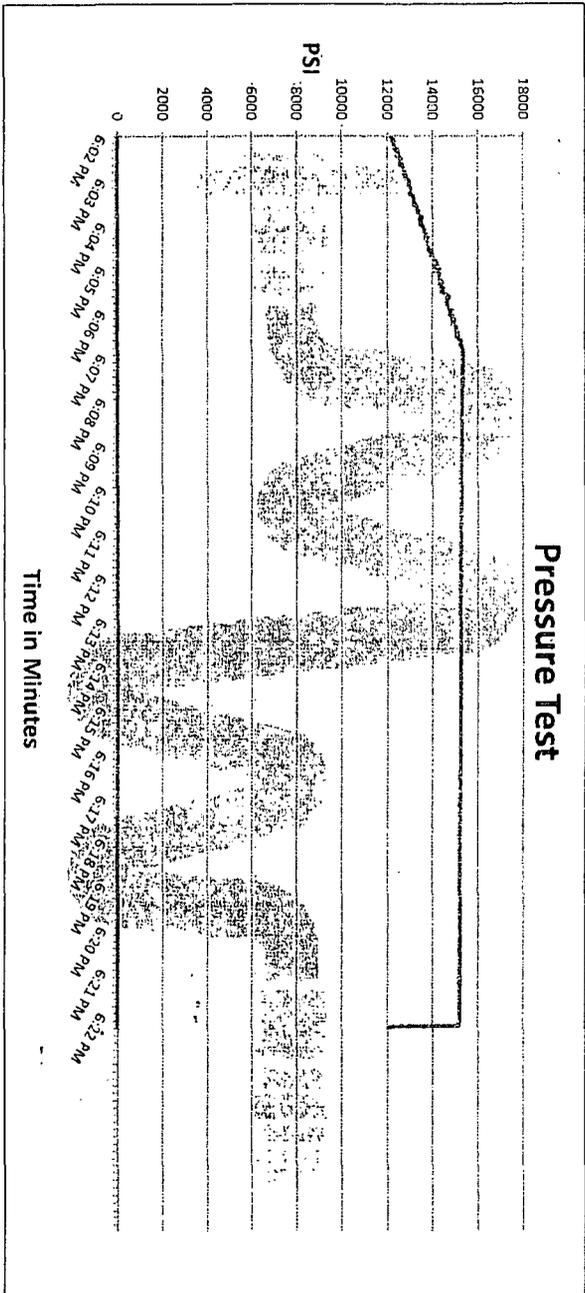


Midwest Hose & Specialty, Inc.

Customer: Cactus

Pick Ticket #: 229391

Hose Specifications		Verification	
Hose Type	Mud	Length	35'
I.D.	4"	Type of Fitting	4 1/16 10K
O.D.	6.13"	Die Size	6.62"
Working Pressure	10000 PSI	Burst Pressure	Standard Safety Multiplier Applies
Hose Serial #	11060	Coupling Method	Swage
Hose Assembly Serial #	229391	Final O.D.	6.56"



Test Pressure  
15000 PSI

Time Held at Test Pressure  
16 2/4 Minutes

Actual Burst Pressure

Peak Pressure  
15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tony Kellington

Approved By: Phil Morubby

*Tony Kellington*

*Phil Morubby*



Midwest Hose  
& Specialty, Inc.

### Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	CACTUS	Hose Assembly Type	Choke & Kill
MWH Sales Representative	EVAN SPARKMAN	Certification	API 7K
Date Assembled	12/11/2013	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	191672	Hose Lot # and Date Code	11060 10/13
Customer Purchase Order #	RIG#137 M12653	Hose I.D. (Inches)	4"
Assembly Serial # (Pick Ticket #)	229391	Hose O.D. (Inches)	6.60"
Hose Assembly Length	35 FEET	Armor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R4 0X64WB	Stem (Part and Revision #)	R4 0X64WB
Stem (Heat #)	1311405220	Stem (Heat #)	1311405220
Ferrule (Part and Revision #)	RF4.0	Ferrule (Part and Revision #)	RF4.0
Ferrule (Heat #)	120368	Ferrule (Heat #)	120368
Connection (Part #)	4.1/16" 10K	Connection (Part #)	4.1/16" 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	6.62"	Dies Used	6.62"
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	16 1/2		
Date Tested	12/11/2013	Tested By	Approved By
		<i>Tokeef</i>	<i>Phillip M. [Signature]</i>



Midwest Hose  
& Specialty, Inc.

### Certificate of Conformity

Customer: <b>CACTUS</b>	Customer P.O.# <b>RIG#137 M12653</b>
Sales Order # <b>191672</b>	Date Assembled: <b>12/11/2013</b>

### Specifications

Hose Assembly Type: <b>Choke &amp; Kill</b>	
Assembly Serial # <b>229391</b>	Hose Lot # and Date Code <b>11060 10/13</b>
Hose Working Pressure (psi) <b>10000</b>	Test Pressure (psi) <b>15000</b>

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

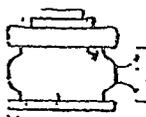
Supplier:  
**Midwest Hose & Specialty, Inc.**  
**3312 S I-35 Service Rd**  
**Oklahoma City, OK 73129**

Comments:

Approved By	Date
<i>Phillip Maystubby</i>	<b>12/11/2013</b>

<b>Well Name:</b>	Blast BLA Federal #7H	<b>Tgt N-S:</b>	-199.70	<b>EOC TVD/MD:</b>	7488.55 / 7747.34
<b>Surface Location:</b>	Section 21 , Township 26S Range 27E	<b>Tgt E-W:</b>	4957.70	<b>VS:</b>	4961.72
<b>Bottom Hole Location:</b>	Section 21 , Township 26S Range 27E	<b>VS Az:</b>	92.31	<b>EOL TVD/MD:</b>	7620.00 / 12245.54

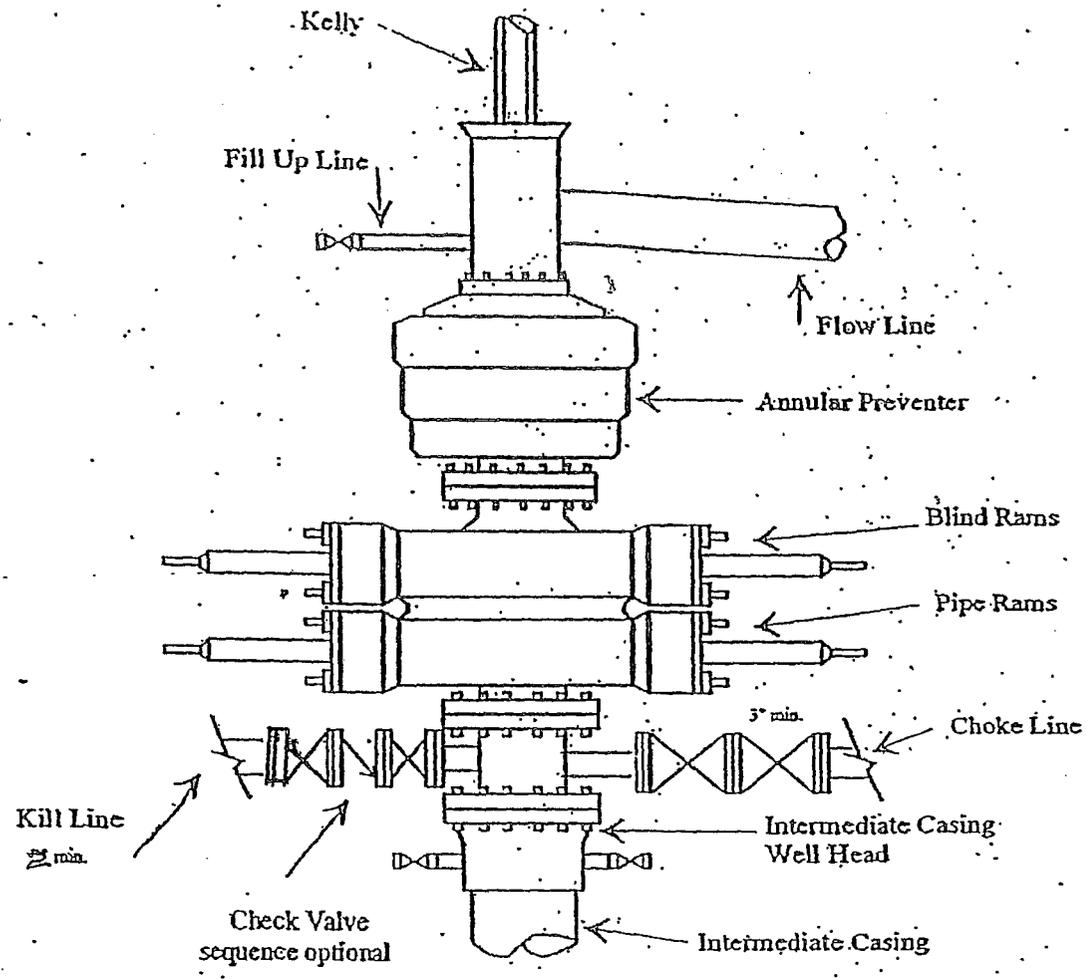
MD	Inc.	Azi.	TVD	+N-S	+E-W	VS	DLS	Comments
0	0	0	0	0	0	0	0	
264.00	0.00	0.00	264.00	0.00	0.00	0.00	0.00	CASTILLE/LM/SD
1204.00	0.00	0.00	1204.00	0.00	0.00	0.00	0.00	TOS
1860.00	0.00	0.00	1860.00	0.00	0.00	0.00	0.00	BOS
2002.00	0.00	0.00	2002.00	0.00	0.00	0.00	0.00	LAMAR
2044.00	0.00	0.00	2044.00	0.00	0.00	0.00	0.00	BELL CANYON
2858.00	0.00	0.00	2858.00	0.00	0.00	0.00	0.00	CHERRY CANYON
2993.00	0.00	0.00	2993.00	0.00	0.00	0.00	0.00	MANZANITA MARKER
4018.00	0.00	0.00	4018.00	0.00	0.00	0.00	0.00	BRUSHY CANYON
5620.00	0.00	0.00	5620.00	0.00	0.00	0.00	0.00	BONE SPRING
5756.00	0.00	0.00	5756.00	0.00	0.00	0.00	0.00	AVALON SHALE
6536.00	0.00	0.00	6536.00	0.00	0.00	0.00	0.00	BONE SPRING 1/SD/
7011.28	0.00	0.00	7011.28	0.00	0.00	0.00	0.00	KOP
7025.00	1.65	92.31	7025.00	-0.01	0.20	0.20	12.00	
7050.00	4.65	92.31	7049.96	-0.06	1.57	1.57	12.00	
7075.00	7.65	92.31	7074.81	-0.17	4.24	4.24	12.00	
7100.00	10.65	92.31	7099.49	-0.33	8.21	8.22	12.00	
7125.00	13.65	92.31	7123.93	-0.54	13.47	13.48	12.00	
7150.00	16.65	92.31	7148.06	-0.81	19.99	20.01	12.00	
7175.00	19.65	92.31	7171.81	-1.12	27.77	27.79	12.00	
7200.00	22.65	92.31	7195.12	-1.48	36.78	36.81	12.00	
7225.00	25.65	92.31	7217.93	-1.89	47.00	47.04	12.00	
7250.00	28.65	92.31	7240.18	-2.35	58.39	58.44	12.00	
7275.00	31.65	92.31	7261.79	-2.86	70.94	71.00	12.00	
7275.24	31.67	92.31	7262.00	-2.86	71.06	71.12	12.00	BONE SPRING 2/SD/
7300.00	34.65	92.31	7282.72	-3.41	84.59	84.66	12.00	
7325.00	37.65	92.31	7302.91	-4.00	99.33	99.41	12.00	
7350.00	40.65	92.31	7322.30	-4.64	115.09	115.19	12.00	
7375.00	43.65	92.31	7340.83	-5.31	131.85	131.96	12.00	
7400.00	46.65	92.31	7358.46	-6.02	149.56	149.68	12.00	
7425.00	49.65	92.31	7375.14	-6.77	168.17	168.30	12.00	
7450.00	52.65	92.31	7390.82	-7.56	187.62	187.77	12.00	
7475.00	55.65	92.31	7405.46	-8.37	207.86	208.03	12.00	
7500.00	58.65	92.31	7419.02	-9.22	228.84	229.03	12.00	
7525.00	61.65	92.31	7431.47	-10.09	250.50	250.71	12.00	
7550.00	64.65	92.31	7442.76	-10.99	272.79	273.01	12.00	
7575.00	67.65	92.31	7452.87	-11.91	295.63	295.87	12.00	
7600.00	70.65	92.31	7461.77	-12.85	318.97	319.23	12.00	
7625.00	73.65	92.31	7469.43	-13.81	342.75	343.02	12.00	
7650.00	76.65	92.31	7475.84	-14.78	366.89	367.18	12.00	
7675.00	79.65	92.31	7480.97	-15.76	391.33	391.65	12.00	
7700.00	82.65	92.31	7484.82	-16.76	416.01	416.35	12.00	
7725.00	85.65	92.31	7487.37	-17.76	440.86	441.22	12.00	
7747.34	88.33	92.31	7488.55	-18.66	463.14	463.52	12.00	TARGET 2ND BONE SPRING SAND
12245.54	88.33	92.31	7620.00	-199.70	4957.70	4961.72	0.00	EOL



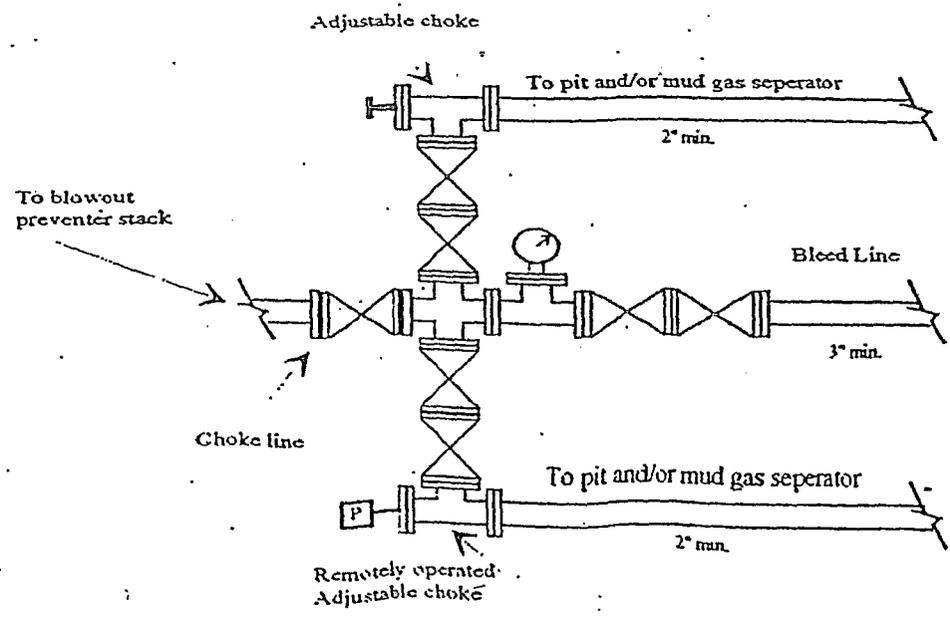
# Yates Petroleum Corporation

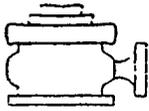
BOP-3

## Typical 3,000 psi Pressure System Schematic Annular with Double Ram Preventer Stack



### Typical 3,000 psi choke manifold assembly with at least these minimum features

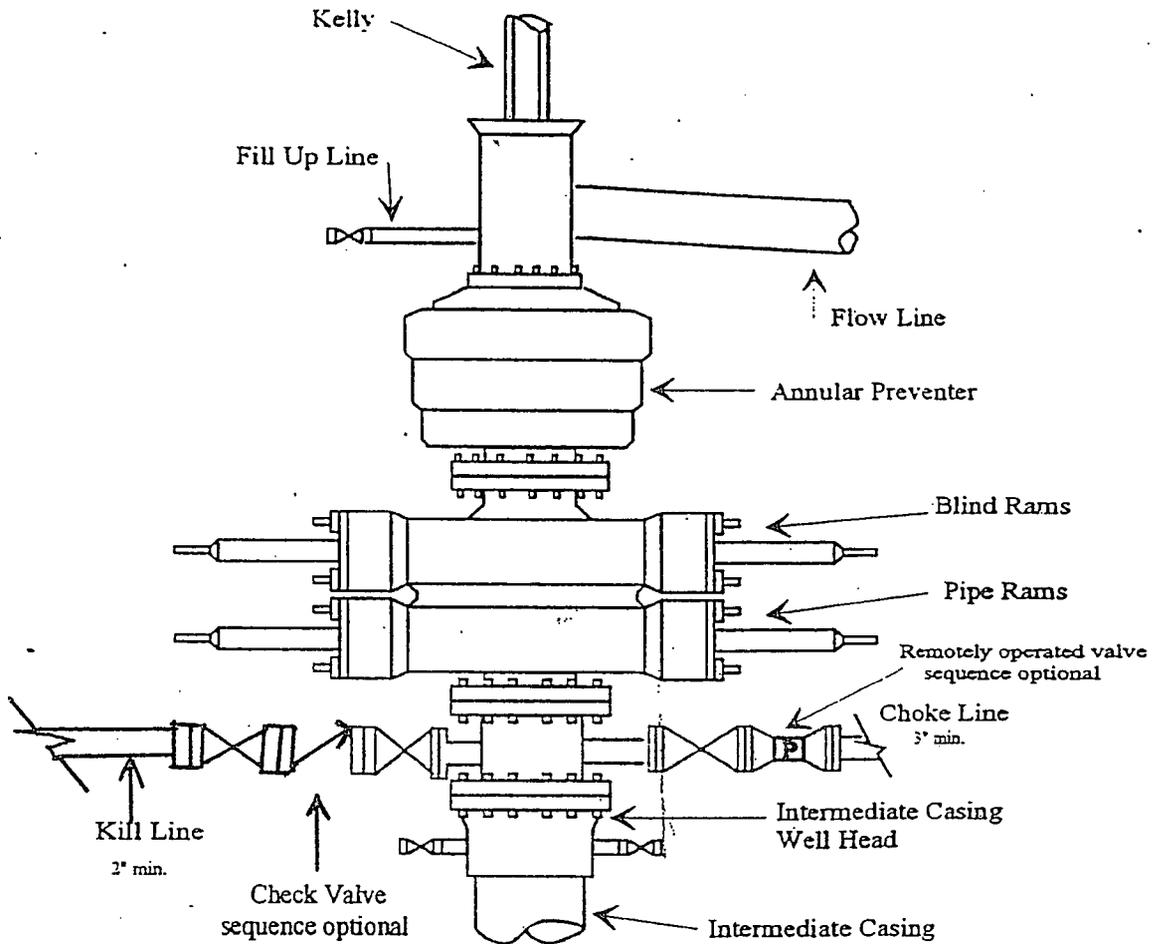




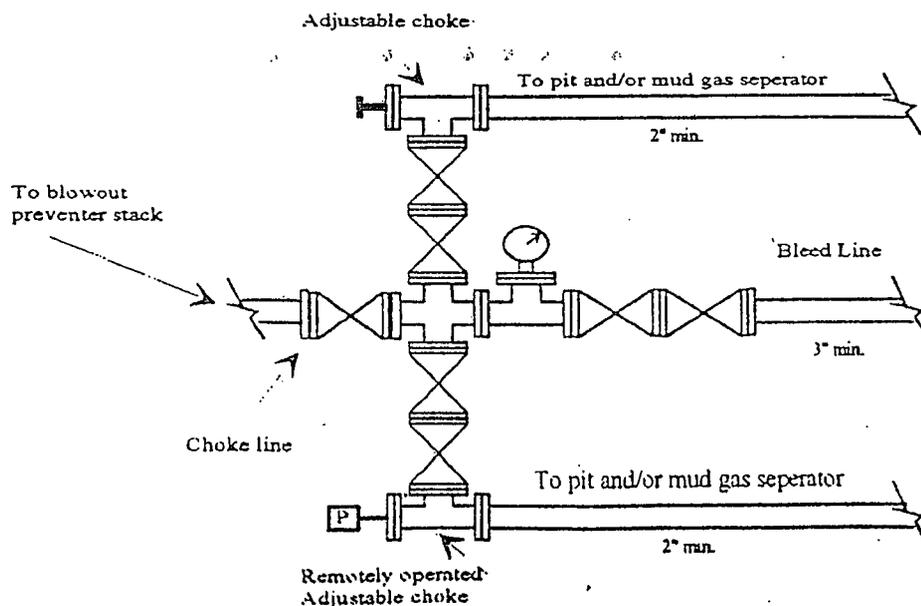
# Yates Petroleum Corporation

BOP-4

## Typical 5,000 psi Pressure System Schematic Annular with Double Ram Preventer Stack

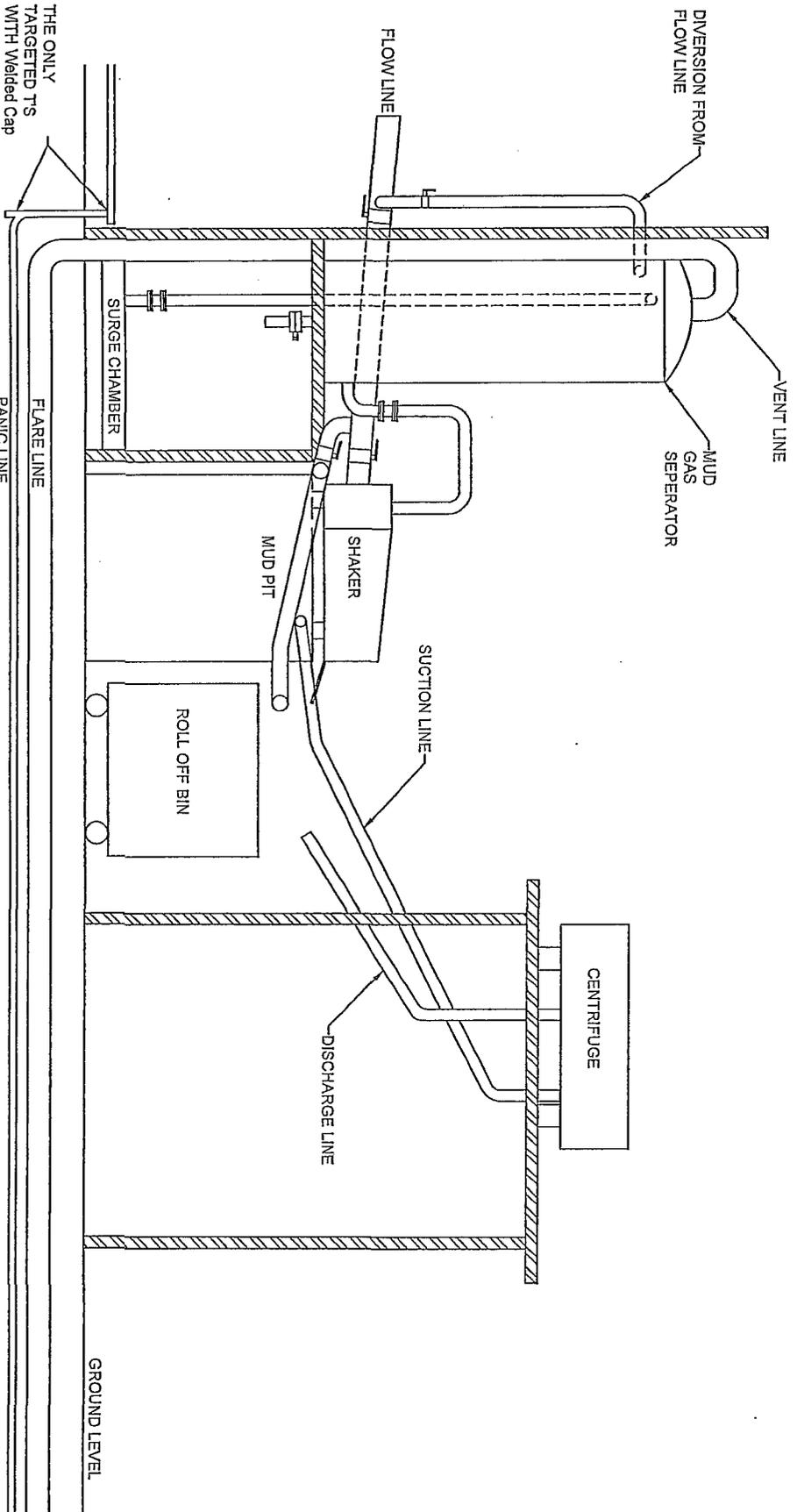


### Typical 5,000 psi choke manifold assembly with at least these minimum features



# YATES PETROLEUM CORPORATION

Piping from Choke Manifold  
to the Closed Loop Drilling Mud System



The flare discharge must be 100' from wellhead for non H2S wells and 150' from wellhead for wells expected to encounter H2S.

# Yates Petroleum Corporation Closed Loop System

## Equipment Design Plan

Closed Loop System will consist of:

1 – double panel shale shaker

1 – (minimum ) Centrifuge, certain wells and flow rates may require 2 centrifuges

On certain wells, the Centrifuge will be replaced by a Clackco Settling Tank System

1 – minimum centrifugal pump to transfer fluids

2- 500 bbl. FW Tanks

1 – 500 bbl. BW Tank

1 – half round frac tank – 250 bbl. capacity as necessary to catch cement / excess mud returns generated during a cement job.

1 Set of rail cars / catch bins

Certain wells will use an ASC Auger Tank

## Operation Plan

All equipment will be inspected at least hourly by rig personnel and daily by contractors' personnel.

Any spills / leaks will be reported to YPC, NMOCD, and cleaned up without delay.

## Closure Plan

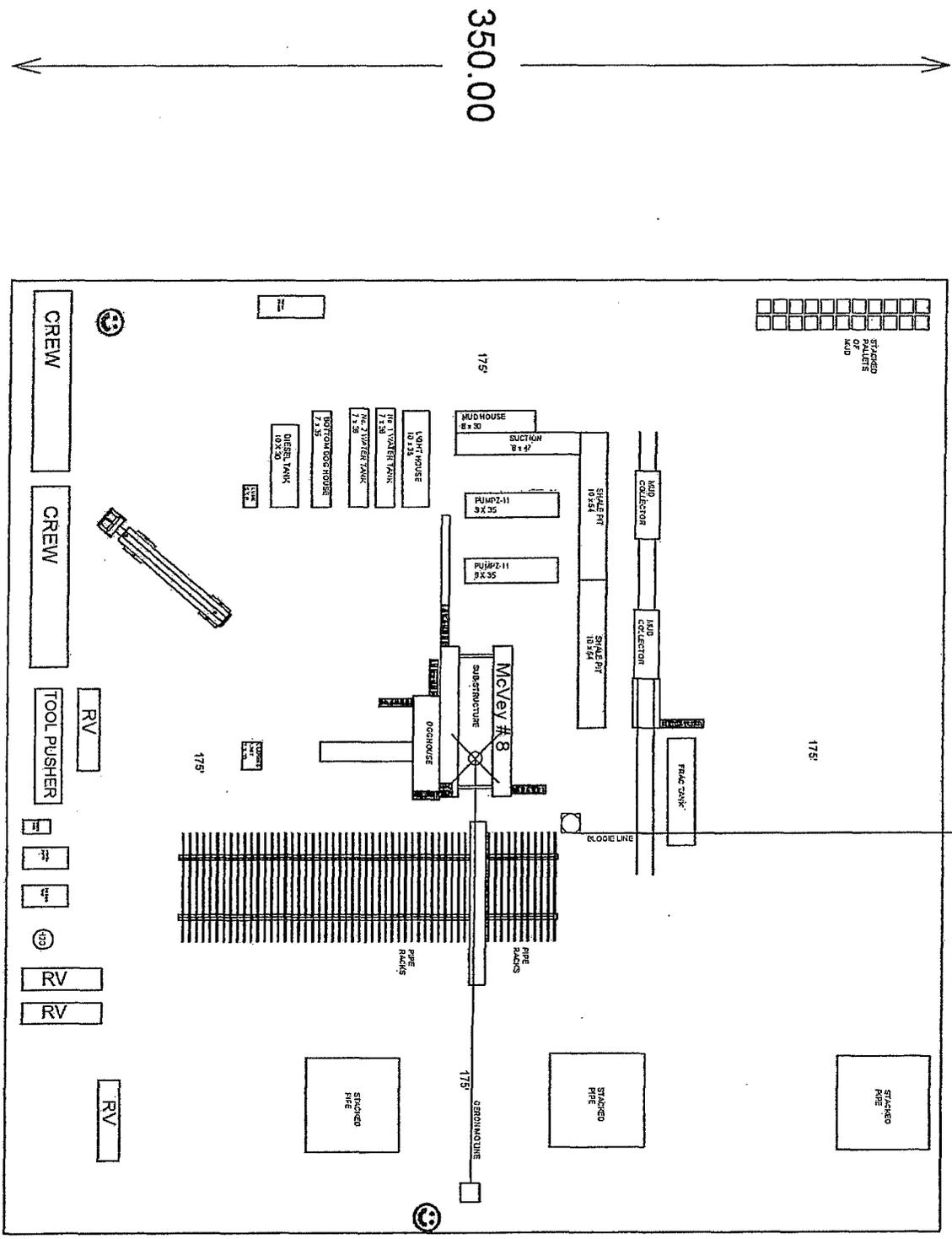
Drilling with Closed Loop System, haul off bins will be taken to Gandy Marley, Lea Land Farm, CRI or Sundance Services Inc.

YATES PETROLEUM CORPORATION

McVay # 8

12-16-13

*Big Plat #1*



- Safe Breathing Area with caution signs and breathing equipment
- Wind Direction Indicators
- H2S Monitor with alarm at the well nipple

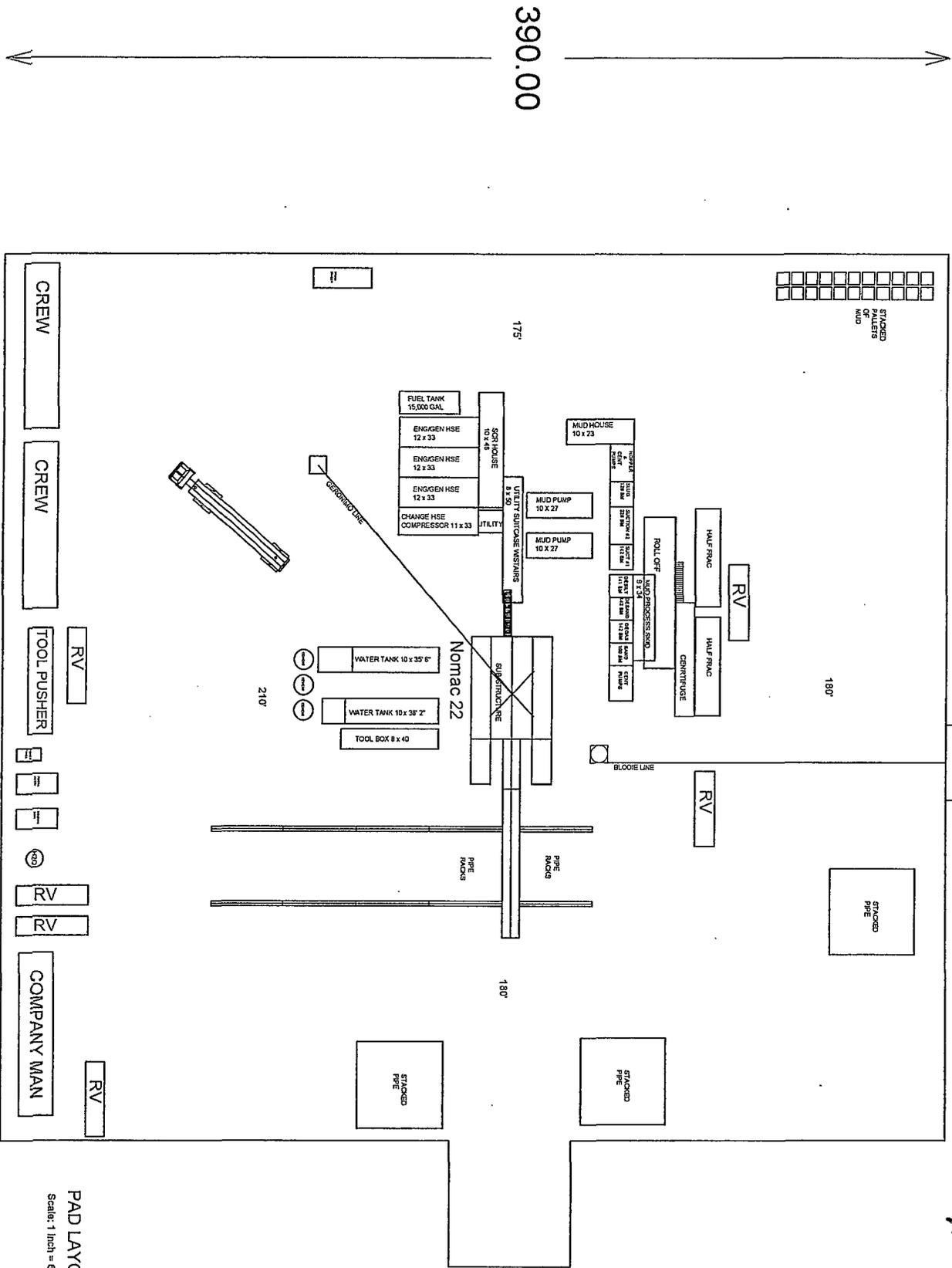
**PAD LAYOUT**  
Scale: 1 inch = 60 feet

# YATES PETROLEUM CORPORATION

Nomac 22

06-24-13

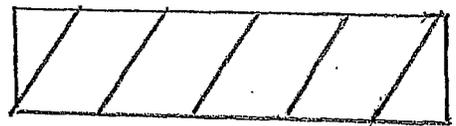
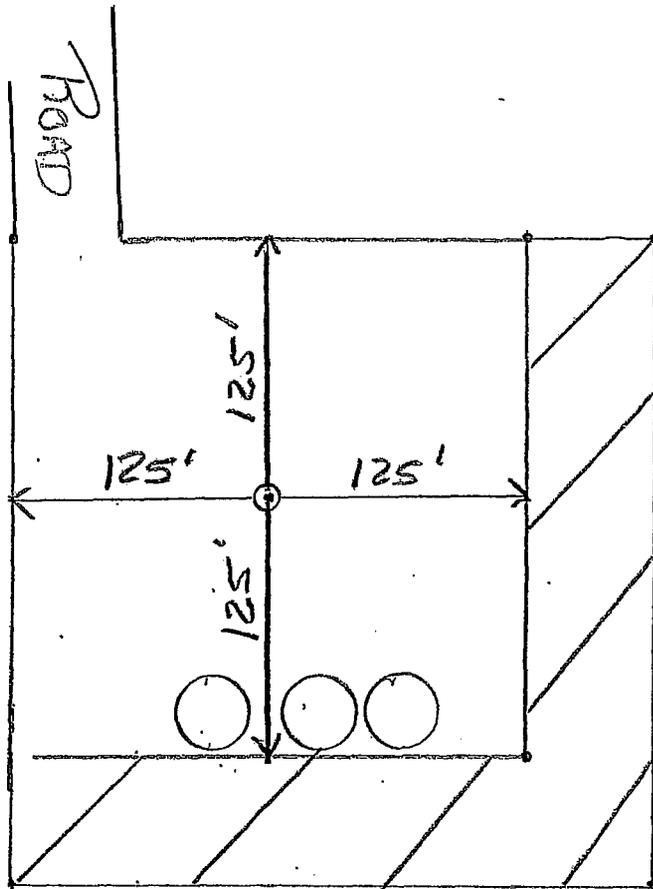
*Rig Plat #2*



PAD LAYOUT  
Scale: 1 inch = 60 feet

# RECLAMATION PLAT

BLAST BLA<sup>(6)</sup>  
FEDERAL  
# 7H  
EXHIBIT F



RECLAIMED  
AREA

BLAST BLA FEDERAL #7H

CORRECTED DEFICIENCIES FROM LETTER DATED

JANUARY 8, 2016

**Comment on letter:** Diagram now shows the location of the Blast BLA Federal #7H on the same pad as the Blast BLA Federal #6H well location.

1. Maps and Plats now labeled with Exhibit #'s and or letters. Number 1 in Packet.
2. NEED MAP SHOWING WELLS IN THE AREA Number 2 in Packet.
3. Never had to submit one in the past. Not submitting one now.
4. Map showing wells I one mile radius of the Blast BLA Federal #7H. Number 4 in the Packet.
5. New access road will come in to the Northwest corner of the location. Corrected Reclamation Plat to show the access road coming into the northwest corner of pad. Number 6 in Packet.
6. In a phone conversation with Paul Murphy on August 31, 2015 Paul and I agreed that the road would come into the northwest corner instead of the southwest corner as requested in Item 2 A. of the APD Wonder why this showed up as a deficiency? Number 5 in Packet.
7. Exhibit is now identified as Exhibit B in Item #3 B in the APD. Number 5 in Packet.

08/31/2015

## **Blast BLA Federal #6H & #7H Correction**

Contacted Cy Cowan and made a correction in #2 Planned Access Road of the Surface Use Plan in the APD's for Blast BLA Federal #6H & #7H. Made the correction for access road from **SOUTHWEST CORNER** to **NORTHWEST CORNER** of pad. Also corrected 0.4 mile of road to 526.3 ft of proposed access road.

Paul C. Murphy

5

**MULTI-POINT SURFACE USE AND OPERATIONS PLAN**  
**Yates Petroleum Corporation**  
Blast BLA Federal #7H  
2150 FSL and 15' FWL Surface Hole Location  
1980' FSL and 330' FEL Bottom Hole Location  
Section 21, T26S-R27E  
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 ROADS:

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 25 miles southeast of Malaga, New Mexico and the access route to the location is indicated in red and green on Exhibit A. Operator will maintain existing roads in condition the same or better than before operations begin. Operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures along the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. Operator will reasonably prevent and abate fugitive dust as needed when created by vehicular traffic and equipment caused by the operator. The BLM's written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

DIRECTIONS:

Go south of Malaga, NM on Highway 285 or approximately 10.7 miles to Whites City Road (CR-724). Turn right on Whites City Road and go approximately 7.5 miles. Just past a caliche pit on the left turn left here on an existing lease road. Go south on the lease road for approximately 2.4 miles to Concho's Cluster State Com. #5H well location. From the southwest corner of this well go the existing lease road to the south road for approximately 200 feet. Turn left here and follow lease road along a pipeline right of way for approximately .3 of a mile. Turn right here and go to the west for approximately .2 of a mile to the southeast corner of the Blast BLA Federal #2H and #3H well location. The new access road will start here going south for approximately .4 of a mile to the southwest corner of the proposed well location.

2. PLANNED ACCESS ROAD.

- A. The new access road will be approximately .4 of a mile in length from the point of origin to the northwest corner of the proposed well location. The road will be crowned and ditched to a 2% slope from the tip of the crown to the edge of the driving surface.
- B. Ditches will be 3' wide with a 3:1 slopes.
- C. The route of the road is visible.
- D. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL

- A. There is drilling activity within a one-mile radius of the well site.
- B. An Exhibit B shows existing wells within a one-mile radius of the proposed well site.

Blast BLA Federal #7H

Surface Use Plan

ADDITIONAL OF INFORMATION.

4. B. LOCATION OF EXISTING AND /OR PROPOSED FACILITIES

ADDITIONAL OF INFORMATION.

- B. One (1) 480 volt three phase raptor proof above ground power line. The entire length of the proposed main power line will be approximately 3800' in length running north and south crossing Section 20. From a point on the main power line being approximately 2500' from the tie in point a drop off line will go east for 538.3' to the south side of the Blast BLA Federal #7H well location.

Please note attached Exhibits A and A'.

**Bureau of Land Management  
RECEIVED**

**NOV 20 2015**

**Carlsbad Field Office  
Carlsbad, NM**

- B. Please note exhibits Rig Size #1 and Rig Size #2 show the relative location and dimensions of the well pad, location of the drilling equipment, pulling unit orientation and access road approach. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the “Pit Rule” 19.15.17 NMAC.
- C. A 600' x 600' area has been staked and flagged.

10. PLANS FOR RESTORATION:

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible. The location will be reduced to a 250' x 250' after completion operations have been conducted. At this point the surfacing material will be removed, topsoil will be redistributed and the area will be reseeded. Please note attached Reclamation Plat.
- B. If the proposed well is plugged and abandoned, all equipment and other material will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible. At this point the surfacing material will be removed, topsoil will be redistributed and the area will be reseeded. These actions will be completed and accomplished as expeditiously as possible.
- C. The reclamation of the pad will be done in sixty days if possible after the well is put in production.

11. SURFACE OWNERSHIP:

Surface Estate Bureau of Land Management  
620 East Greene Street, Carlsbad, NM 88220.

Mineral Estate: Federal Lease NM-100549  
Bureau of Land Management  
620 East Greene Street, Carlsbad, NM 88220

12. OTHER INFORMATION:

- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corp
LEASE NO.:	NM100549
WELL NAME & NO.:	7H-Blast BLA Federal
SURFACE HOLE FOOTAGE:	2150'/S & 15'/W
BOTTOM HOLE FOOTAGE:	1980'/S & 330'/E
LOCATION:	Section 21, T. 26 S., R. 27 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.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Cave/Karst
  - Avian Protection
- Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Drilling**
  - Cement Requirements
  - H2S Requirements
  - Logging Requirements
  - Waste Material and Fluids
- Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

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

## **II. PERMIT EXPIRATION**

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

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

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

## **IV. NOXIOUS WEEDS**

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

## V. SPECIAL REQUIREMENT(S)

### Cave and Karst

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

#### Cave/Karst Surface Mitigation

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

##### **Construction:**

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

##### **No Blasting:**

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

##### **Pad Berming:**

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

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

##### **Tank Battery Liners and Berms:**

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

##### **Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, siting valves and lines so they can be visually inspected, or installing

electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

**Automatic Shut-off Systems:**

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

**Cave/Karst Subsurface Mitigation**

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

**Rotary Drilling with Fresh Water:**

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

**Directional Drilling:**

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

**Lost Circulation:**

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

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

**Abandonment Cementing:**

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

**Pressure Testing:**

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

**Avian Protection**

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.

## **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 enclosure 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 enclosure fencing design, refer to BLM's Oil and Gas Gold Book, Enclosure 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**

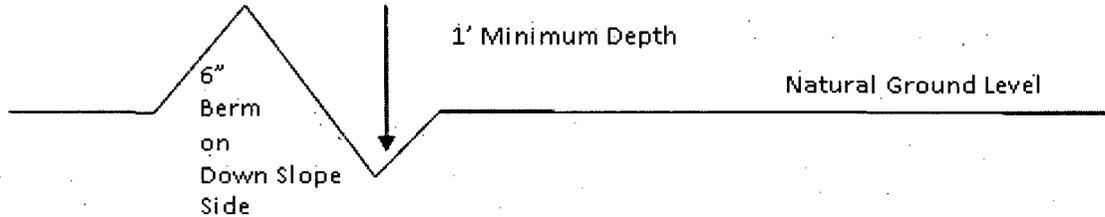
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out-sloping and in-sloping, 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:

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

### Cattleguards

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

### Fence Requirement

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

### Public Access

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

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

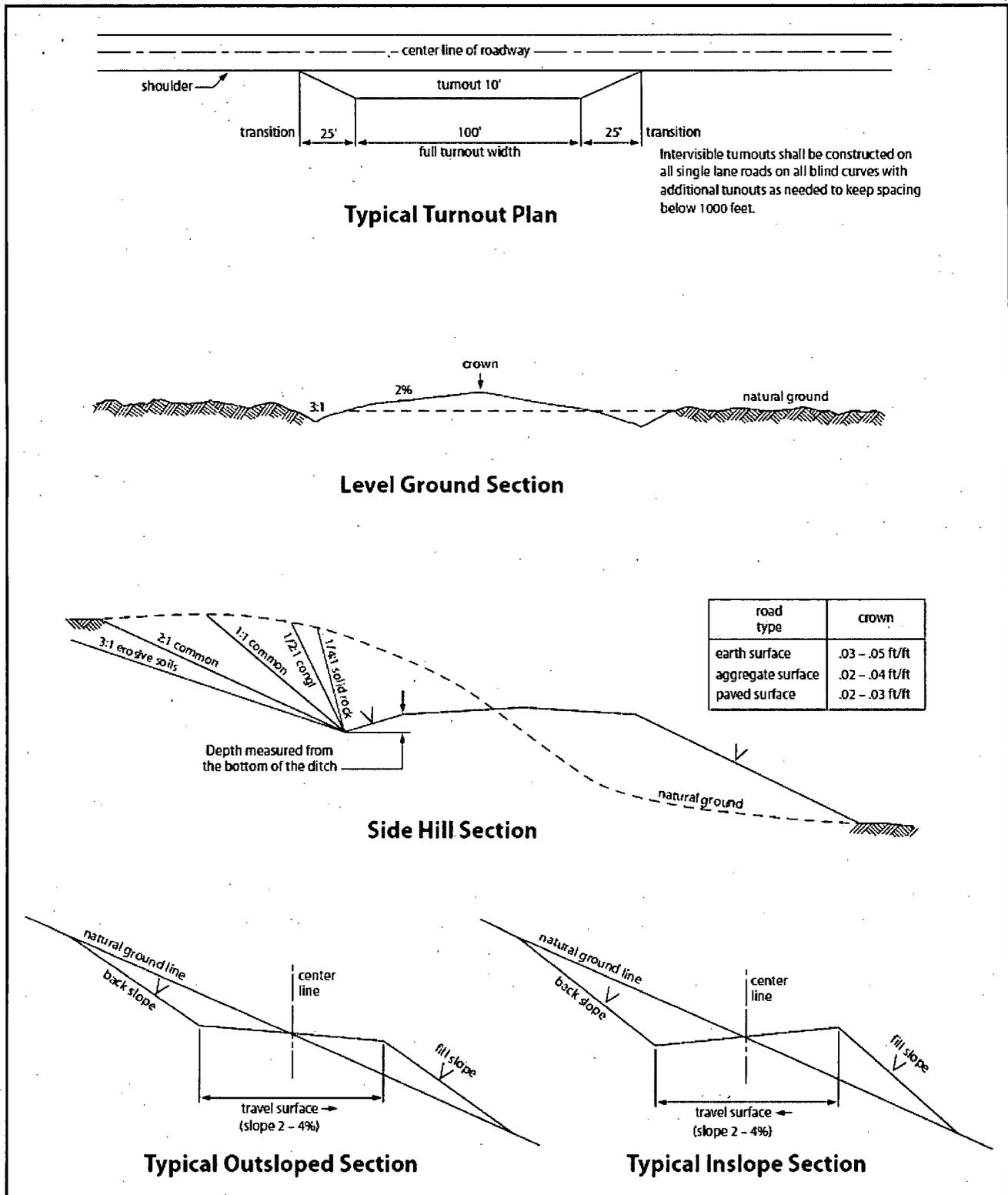


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

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

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

**Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

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

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

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

**Wait on cement (WOC) for Water Basin:**

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

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

**HIGH CAVE/ KARST**

Possible Water Flows in the Castile and in the Salado

Possible Lost Circulation in the Delaware

**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 400 feet and cemented to the surface. **Fresh water mud to be used to setting depth.**
  - 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, which shall be set at approximately 2100 feet in the basal anhydrite of the Castile Formation or the top of the Lamar Limestone:

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.**

**Formation below the 9-5/8 inch shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.**

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

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:  
 Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Additional cement may be required, due to calculations by BLM standards resulted in the cement excess being determined to be 22%.**
4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

#### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the

straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.
  - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9 5/8 inch** 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.**
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
  - d. The results of the test shall be reported to the appropriate BLM office.
  - e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

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

**D. DRILL STEM TEST**

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

**E. WASTE MATERIAL AND FLUIDS**

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

**KGR 08312015**

**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 enclosure 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 Enclosures**

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 enclosure 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 or dune areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

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

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

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

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

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

legible condition for the life of the pipeline.

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

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

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

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

### **C. ELECTRIC LINES**

#### **STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

11. Special Stipulations:

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

## **IX. INTERIM RECLAMATION**

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

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

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

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

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

## X. FINAL ABANDONMENT & RECLAMATION

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

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

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM. Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

### Mixture 4, for Gypsum Sites

The holder shall seed all the 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:

<u>Species</u>	<u>lb/acre</u>
Alkli Sacaton ( <i>Sporobolus airoides</i> )	1.5
DWS~ Four-wing saltbush ( <i>Atriplex canescens</i> )	8.0
~DWS: DeWinged Seed	

\*Pounds of pure live seed:

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

## NMOCD CONDITION OF APPROVAL

The *New!* Gas Capture Plan (GCP) notice is posted on the NMOCD website under Announcements. The Plan became effective May 1, 2016. A copy of the GCP form is included with the NOTICE and is also in our FORMS section under Unnumbered Forms. Please review filing dates for all applicable activities currently approved or pending and submit accordingly. Failure to file a GCP may jeopardize the operator's ability to obtain C-129 approval to flare gas after the initial 60-day completion period.