SECRETARY'S POTASH **Carlsbad Field Office**

OCD Artesia

ATS-15-520

Form 3160-3
(March 2012)

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

HIGH CAVEKARST

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 31 2016
RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: [✓] DRILL [ ] REENTER	5. Lease Serial No. BHL NM-313550 SHL NM057632
	6. If Indian, Allotee or Tribe Name
	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. Bueno "BUE" Federal Com #1H
2. Name of Operator Yates Petroleum Corporation	9. API Well No. 30-015-43948
3a. Address 105 South 4th Street, Artesia NM 88210 / 3b. Phone No. (include area code) 575-748-4347	10. Field and Pool, or Exploratory Parkway; ~~Undesignated~~; Bone Springs
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 660' FSL & 330' FEL, Secrtion 12, T20S-R29E BOTTOM; At proposed prod. zone 965' FSL & 234' FWL, Section 12, T20S-R29E SURFACE	11. Sec., T. R. M. or Blk. and Survey or Area Section 12, T20S-R29E
14. Distance in miles and direction from nearest town or post office* This well is approx. 16 miles northeast of Carlsbad, 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) 234'	16. No. of acres in lease NM-313550-440 acres	17. Spacing Unit dedicated to this well S/2 S/2 of section 12, T20S-R29E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 660'	19. Proposed Depth MD - 12908' TVD - 8429'	20. BLM/BIA Bond No. on file NMB 000434 NMB 000920
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 3316'	22. Approximate date work will start*	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:

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	Name (Printed/Typed) Cy Cowen	Date 03/25/2015
Title Land Regulatory Agent		
Approved by (Signature) /s/George MacDonell	Name (Printed/Typed)	Date OCT 25 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) *(Instructions on page 2)

Capitan Controlled Water Basin

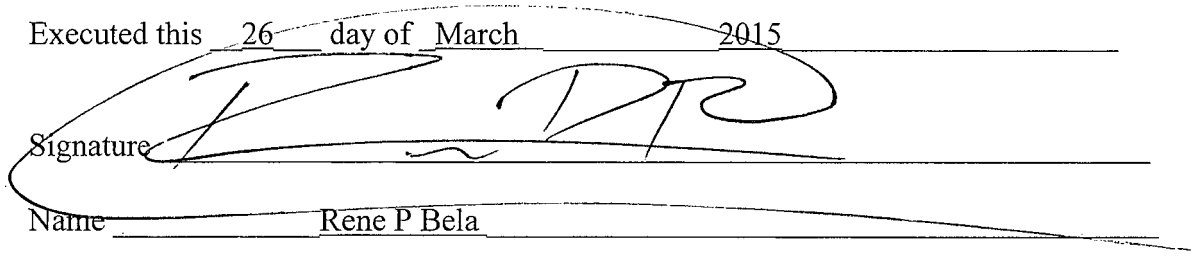
SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

CERTIFICATION
YATES PETROLEUM CORPORATION
Bueno "BUE" Federal Com #1H

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 the 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 26 day of March 2015

Signature 

Name Rene P Bela

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

Telephone (575) 748-4120

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

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

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 31 2016
RECEIVED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-43948	49622	Parkway; ~~Undesignated;~~ Bone Springs

Property Code	Property Name	Well Number
317074	BUENO BUE FEDERAL COM	1H

OGRID No.	Operator Name	Elevation
025575	YATES PETROLEUM CORPORATION	3316

Surface Location

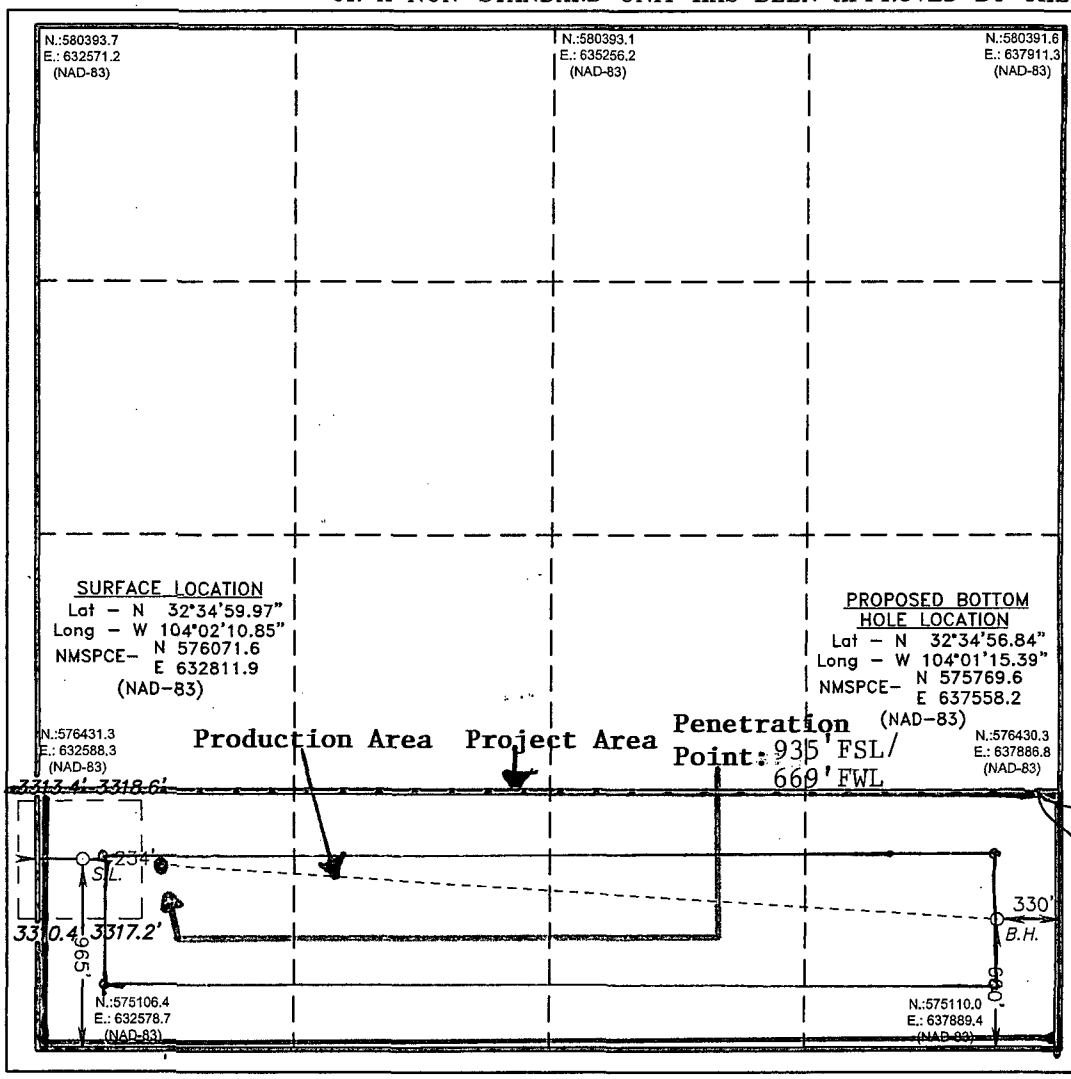
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	12	20 S	29 E		965	SOUTH	234	WEST	EDDY

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
P	12	20 S	29 E		660	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160.00			

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



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.

Signature Date 3/26/15

Cy Cowan
Printed Name

cy@yatespetroleum.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.

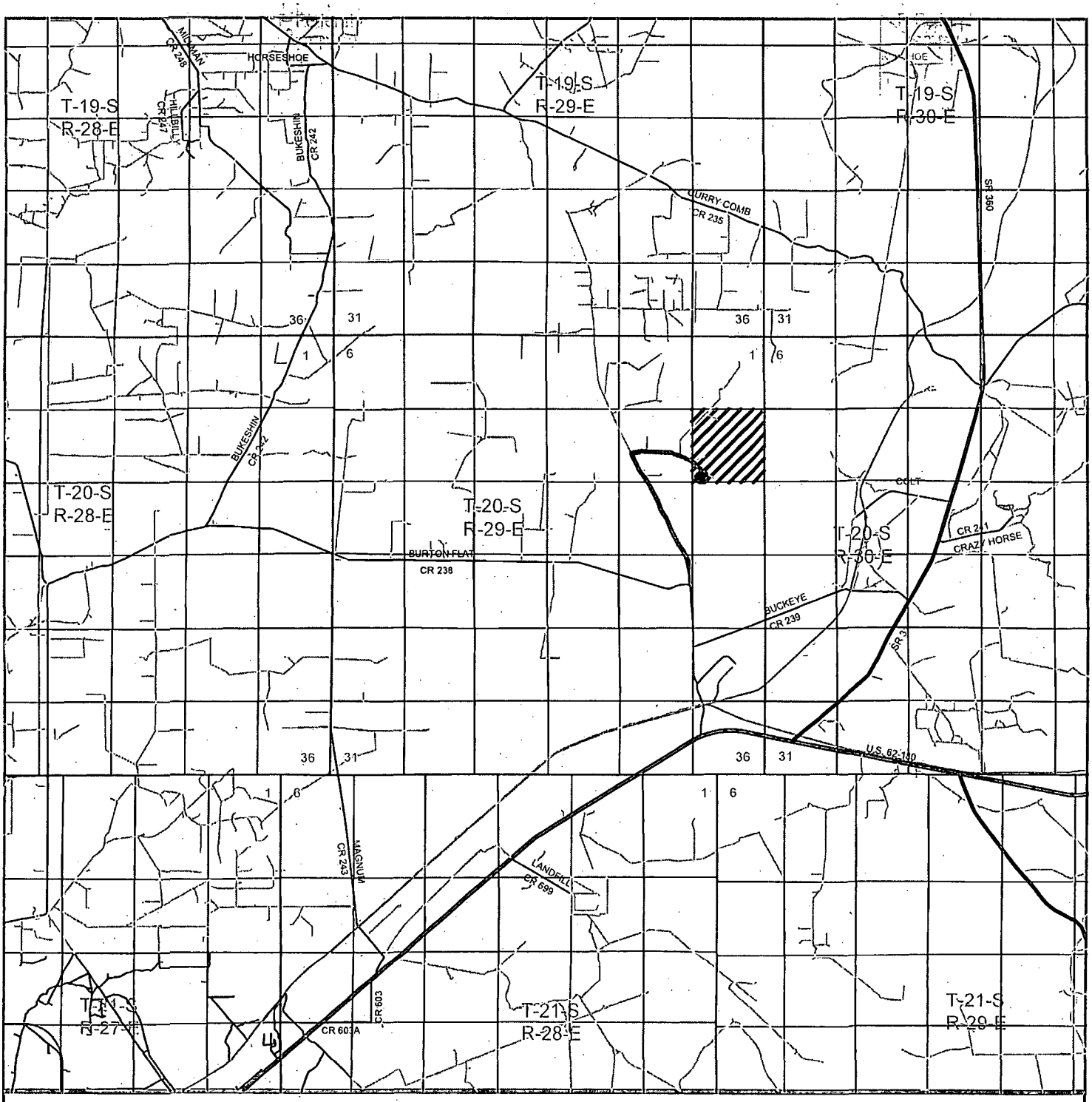
JULY 25, 2014
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977
BASIN SURVEYS

0' 500' 1000' 1000' 2000'
SCALE: 1" = 1000'
WO Num.: 30741



BUENO BUE FEDERAL COM #1H

Located 965' FSL and 234' FWL

Section 12, Township 20 South, Range 29 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 1 MI 2 MI 3 MI 4 MI

SCALE: 1" = 2 MILES

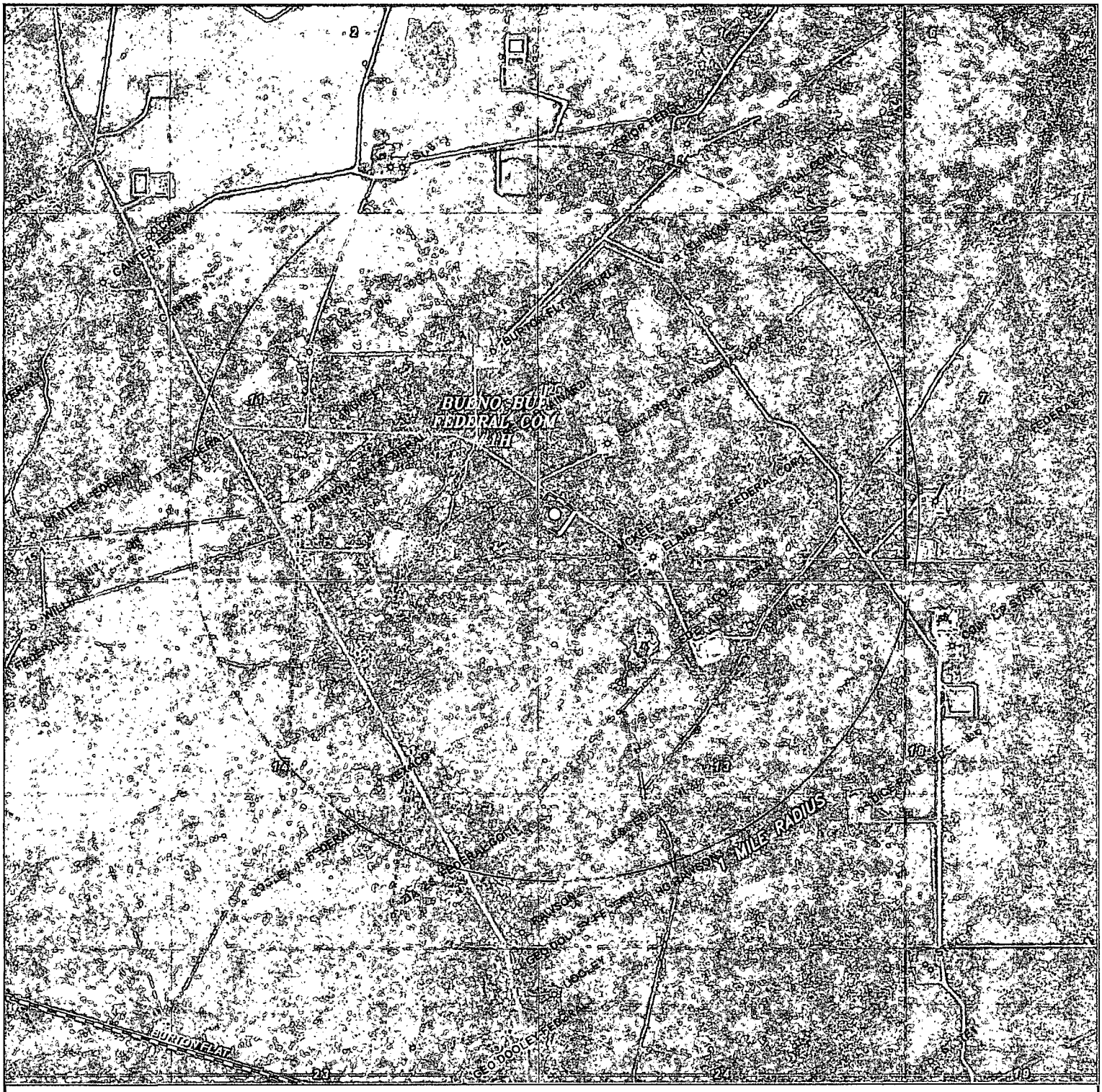
W.O. Number: KAN 30741

Survey Date: 07-25-2014

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

N

YATES PETROLEUM CORPORATION



BUENO BUE FEDERAL COM #1H
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(575) 392-2206 - Fax
basinsurveys.com

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

W.O. Number: KAN 30741

Survey Date: 07-25-2014

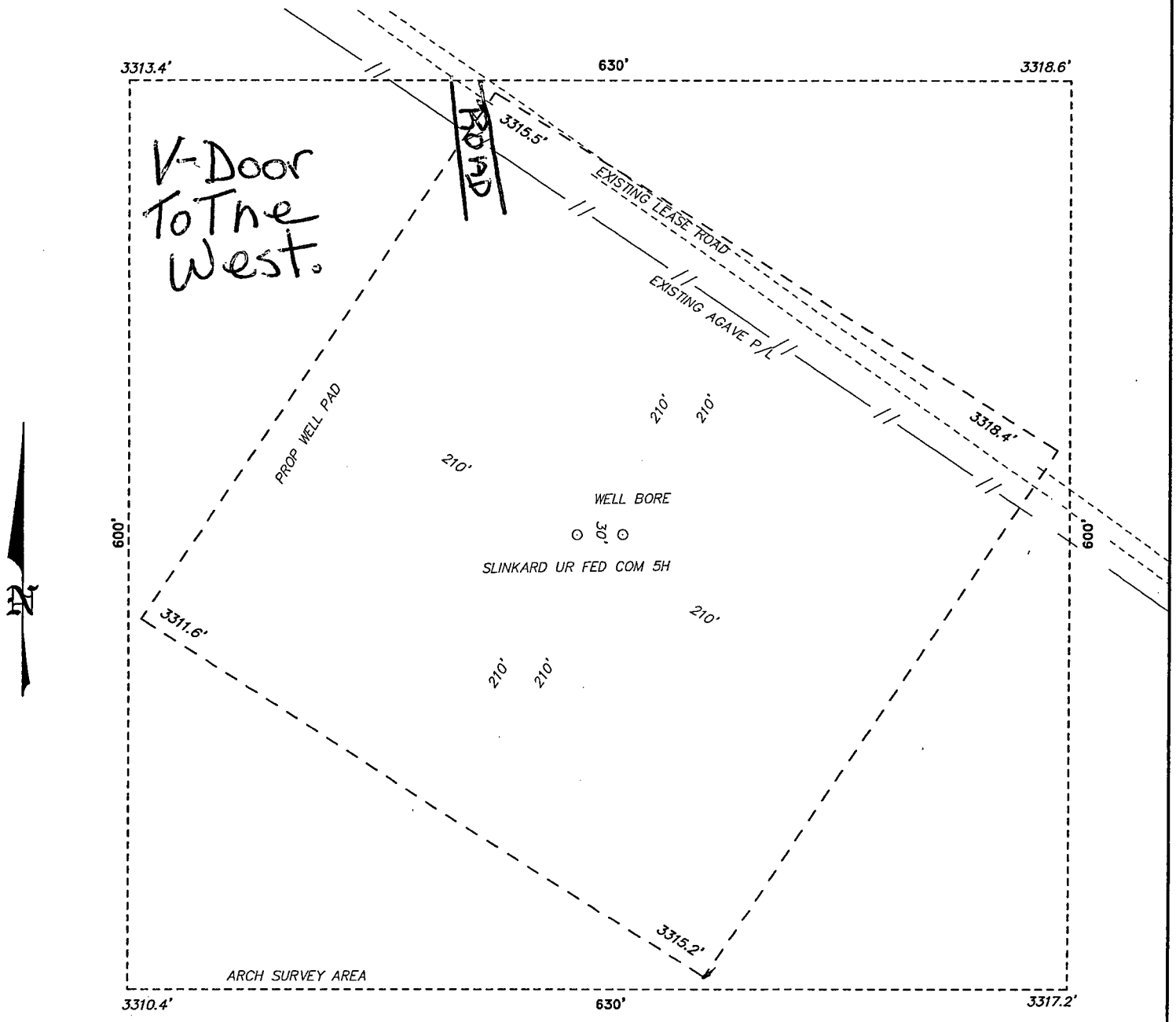
YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

GATES PETROLEUM CORPORATION

SECTION 12, TOWNSHIP 20 SOUTH, RANGE 29 EAST. N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



100 0 100 200 FEET

SCALE: 1" = 100'

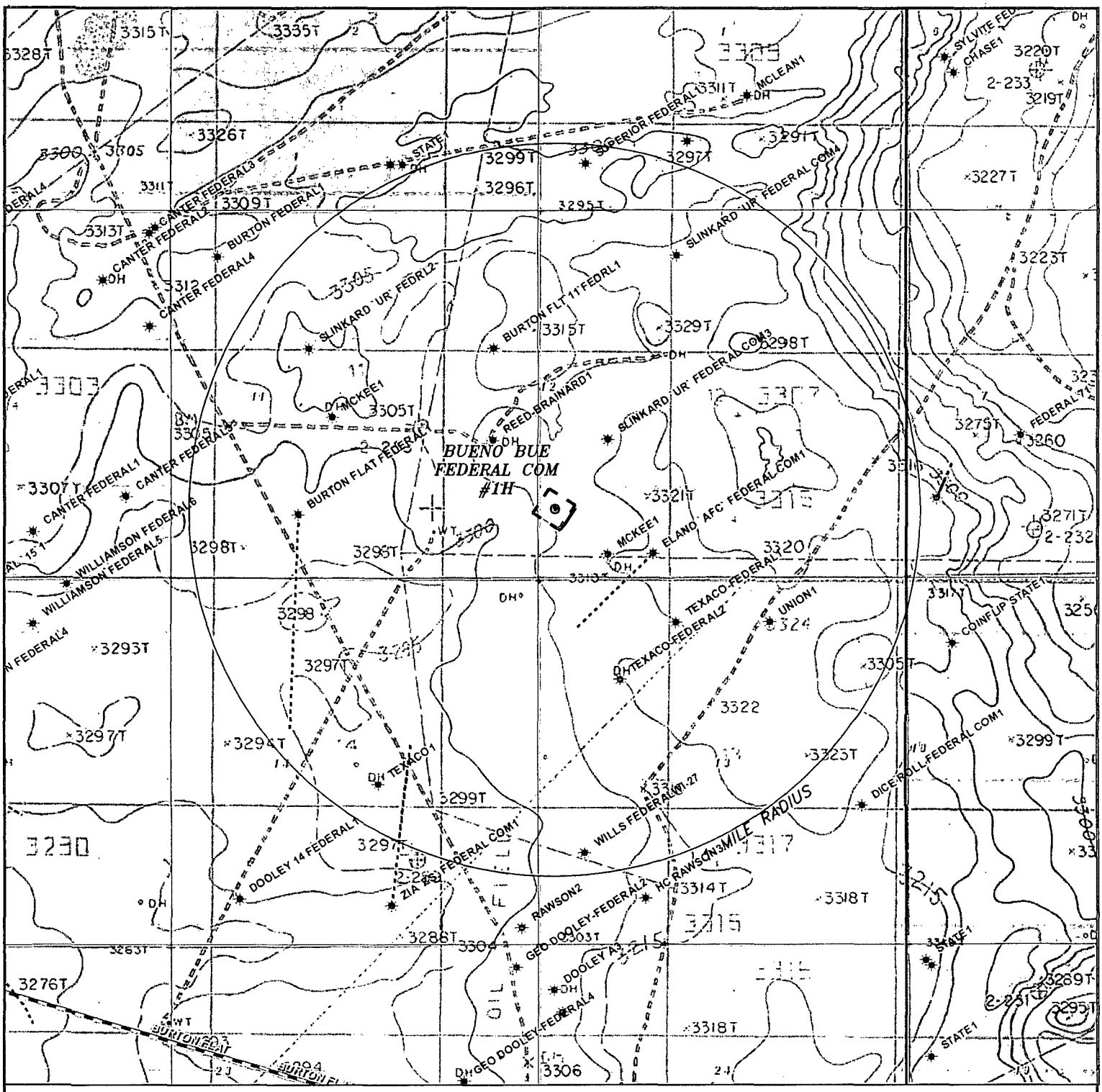
YATES PETROLEUM CORPORATION

REF: BUENO BUE FEDERAL COM #1H / WELL PAD TOPO

THE BUENO BUE FEDERAL COM #1H LOCATED 965' FROM THE SOUTH LINE AND 234' FROM THE WEST LINE OF SECTION 12, TOWNSHIP 20 SOUTH, RANGE 29 EAST. N.M.P.M., EDDY COUNTY, NEW MEXICO.

basin
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: 30741	Drawn By: K. NORRIS	Date: 07-28-2014	Survey Date: 07-25-2014	Sheet 1 of 1 Sheets



BUENO BUE FEDERAL COM #1H
Located 965' FSL and 234' FWL
Section 12, Township 20 South, Range 29 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 30741

Survey Date: 07-25-2014

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

N

YATES PETROLEUM CORPORATION

YATES PETROLEUM CORPORATION
Bueno BUE Federal Com #1H
965' FSL & 234' FWL SHL, 660' FSL & 330' FEL, BHL
Section 12 – T20S-R29E
Eddy County, New Mexico

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

Rustler	244'	Bone Spring Lime	4634'
Top of Salt	519'	Avalon Sand	6284'
Base of Salt	1259'	Middle Avalon	6514'
Tansill	1227'	Lower Avalon	6834'
Yates	1444' Oil	1st Bone Spring Sand	7284' Oil
Capitan Reef	1824'	2nd Bone Spring Sand	8165' Oil
Delaware	3394'		
Cherry Canyon	3654'	Target 2nd Bone Spring Sand	8621' Oil
Brushy Canyon	4634' Oil	TD	12908'

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

Water: Approximately: 0' – 300', 1750' – 3450'
Oil or Gas: See above--All Potential Zones

3. Pressure Control Equipment: Yates Petroleum Corporation hereby request a variance to allow us to place a 2000 PSI annular system with a 21.5" opening will be installed on the 20" casing, then will be pressured up to 1000 PSI and held for 30 minutes for a test. A 3000 PSI BOP with a 13 5/8" opening will be installed on the 13 3/8" casing and also on the 9 5/8" casing. Pressure tests to 3000 PSI and held for 30 minutes 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 Exhibits.

SEE COA

4. 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.

5. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: (All New) 13 3/8" will be H-40/J-55 Hybird → SEE COA

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
36"	30"	N/A	H-40	ST&C	0'-225'	225'
26"	20"	94#	H-40	ST&C	0'-~~300'~~360'	300'
17.5"	13.375"	54.5#	J-55	ST&C	0'-80'	80'
17.5"	13.375"	48#	J-55	ST&C	80'-1200'	1120'
17.5"	13.375"	54.5#	J-55	ST&C	1200'-1750'	550'
12.25"	9.625"	40#	J-55	LT&C	0'-3450'	3450'
8.75"	5.5"	17#	P-110	Buttress Thread	0'-8621'	8621'
8.5"	5.5"	17#	P-110	Buttress Thread	8621'-12908'	4287'

Minimum Casing Design Factors: Burst 1.0, Tensile 1.8, Collapse 1.125

B. CEMENTING PROGRAM: → SEE COA
Conductor Cement (0'-225'): Lead with Ready Mix cement.

Surface Cement (0'-~~300~~ 360'): Lead with 300 sacks of Class PozC 35:65:6 (WT 12.5, YLD 2.0, H2O gal/sack 11.0). Tail with 225 sacks of Class PozC 50/50 (WT 14.2, YLD 1.34, H2O gal/sack 6.3) designed with 100% excess, TOC is surface.

Intermediate 1 Cement (0'-1750'): Lead with 1075 sacks of Class PozC 35:65:6 (WT 12.5, YLD 2.0, H2O gal/sack 11.0); tail in with 205 sacks of Class PozC 50/50 (WT 14.2, YLD 1.34, H2O gal/sack 6.3). Designed with 100% excess, TOC is surface.

Intermediate 2 Cement (0'-3450'): Lead with 940 sacks of Class PozC 35:65:6 (WT 12.5, YLD 2.0, H2O gal/sack 11.0); tail in with 210 sacks of Class PozC 50/50 (WT 14.2, YLD 1.34, H2O gal/sack 6.3). Designed with 100% excess, TOC is surface.

Production Cement (1600'-12908'): Lead with 720 sacks of Lite Crete (WT. 9.7, YLD 2.46, H2O gal/sack 8.98) with the additives being 0.03 gal/sack retarder, 0.2% Anti foam, 0.1% Dispersant, and 39 lbs/sack Extender; tail in with 1440 sacks of Pecos Valley Lite (WT. 13.5, YLD 1.35, H2O gal/sack 6.3). 30% CaCO3 Weight, 3.2% Expansion additive, 2% Antifoam, .8% Retarder, 15 Fluid loss. TOC is 1600', designed with 35% excess.

SEE COA

Well will be drilled vertically depth to 7880' well will then be kicked off and directionally drilled at 12 degrees per 100' with an 8.75" hole to 8621' MD (8357' TVD). Hole size will then be reduced to 8.5" and drilled to 12908' MD (8429' TVD) where 5.5" casing will be set and cemented in a single stage. Penetration point of producing zone will be encountered at 935' FSL & 669' FWL, Section 12-T20S-R29E. Deepest TVD is 8429' in the lateral.

Mud Program and Auxiliary Equipment:

SEE COA

Interval	Type	Weight	Viscosity	Fluid Loss
0'-~~300'~~ 360'	Fresh Water	8.6-9.2	32-34	N/C
~~300~~'-1750'	Brine Water	10.0-10.2	28-29	N/C
1750'-3450'	Fresh Water	8.6-9.2	32-34	N/C
3450'-12908'	Cut Brine	8.8-9.2	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. 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 a derrick hand checking the fluid level in the pits hourly using a nut on the end of a rope hanging just above the fluid level in the pit.

6. EVALUATION PROGRAM: → SEE COA
Samples: 30' samples to 3000'. 10' samples 3000' to TD.
Logging: GR Neutron 30° deviation to the surface casing; density 30° deviation to the intermediate casing; laterolog 30° deviation to the intermediate casing (Schlumberger tools platform/HRLA/CMR)
Coring: None.
DST's: None.
Mudlogging: On after surface casing

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

From:	0	TO: 300'	Anticipated Max. BHP:	144	PSI
From:	300'	TO: 1750'	Anticipated Max. BHP:	928	PSI
From:	1750'	TO: 3450'	Anticipated Max. BHP:	1650	PSI
From:	3450'	TO: 8429'	Anticipated Max. BHP:	4032	PSI

No abnormal pressures or temperatures are anticipated.
H2S Zones Not Anticipated

8. ANTICIPATED STARTING DATE:
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 20 days to drill the well with completion taking another 10 days.

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

Anticipated BHP:

From:	225'	TO:	300'	Anticipated Max. BHP:	144	PSI
From:	300'	TO:	1750'	Anticipated Max. BHP:	928	PSI
From:	1750'	TO:	3450'	Anticipated Max. BHP:	1650	PSI
From:	3450'	TO:	8429'	Anticipated Max. BHP:	4032	PSI

No abnormal pressures or temperatures are anticipated.
H2S Zones Not Anticipated

8. ANTICIPATED STARTING DATE:

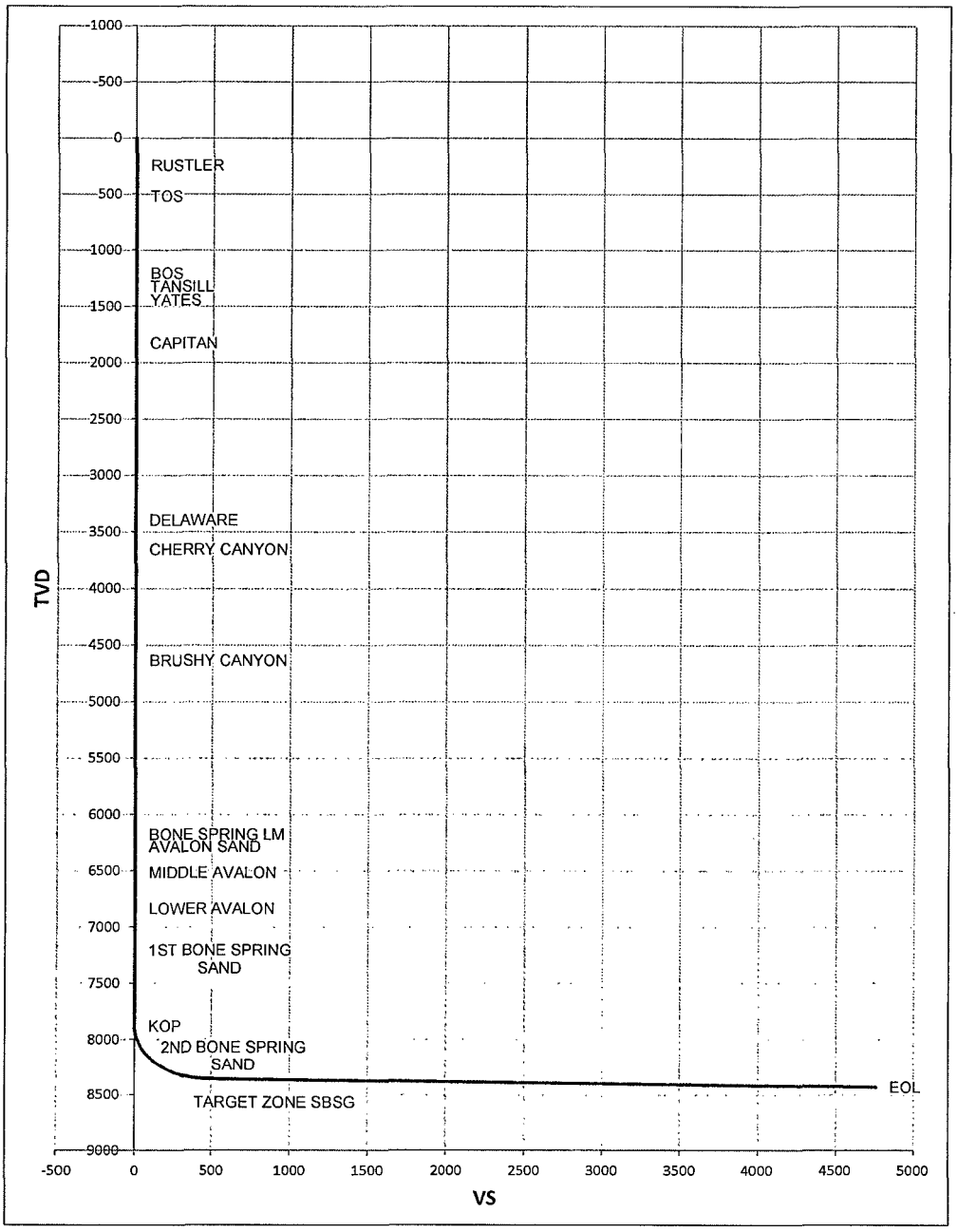
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 65 days to drill the well with completion taking another 30 days.

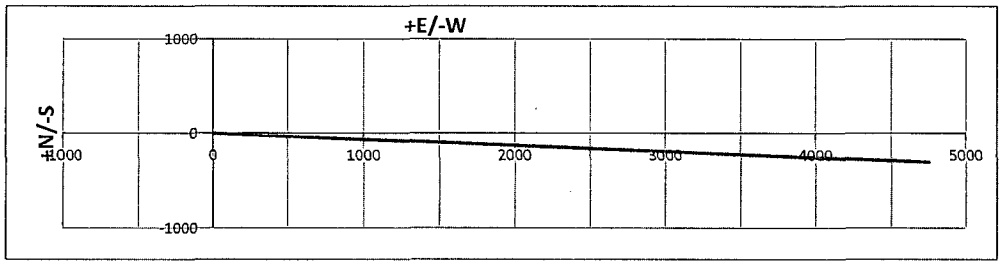
Note: Please note contingency plan.

Well Name:	Bueno BUE Federal Com #1H	**Tgt N/-S:**	-302.00		
		Tgt E/-W:	4746.30	**EOC TVD/MD:**	8356.90 / 8621.47
Surface Location:	Section 12 , Township 20S Range 29E	**VS:**	4755.90		
Bottom Hole Location:	Section 12 , Township 20S Range 29E	**VS Az:**	93.64	**EOL TVD/MD:**	8429.00 / 12907.93

MD	Inc.	Azi.	TVD	+N/-S	+E/-W	VS	DLS	Comments
0	0	0	0	0	0	0	0	
244.00	0.00	0.00	244.00	0.00	0.00	0.00	0.00	RUSTLER
519.00	0.00	0.00	519.00	0.00	0.00	0.00	0.00	TOS
1259.00	0.00	0.00	1259.00	0.00	0.00	0.00	0.00	BOS
1279.00	0.00	0.00	1279.00	0.00	0.00	0.00	0.00	TANSILL
1444.00	0.00	0.00	1444.00	0.00	0.00	0.00	0.00	YATES
1824.00	0.00	0.00	1824.00	0.00	0.00	0.00	0.00	CAPITAN
3394.00	0.00	0.00	3394.00	0.00	0.00	0.00	0.00	DELAWARE
3654.00	0.00	0.00	3654.00	0.00	0.00	0.00	0.00	CHERRY CANYON
4634.00	0.00	0.00	4634.00	0.00	0.00	0.00	0.00	BRUSHY CANYON
6174.00	0.00	0.00	6174.00	0.00	0.00	0.00	0.00	BONE SPRING LM
6284.00	0.00	0.00	6284.00	0.00	0.00	0.00	0.00	AVALON SAND
6514.00	0.00	0.00	6514.00	0.00	0.00	0.00	0.00	MIDDLE AVALON
6834.00	0.00	0.00	6834.00	0.00	0.00	0.00	0.00	LOWER AVALON
7284.00	0.00	0.00	7284.00	0.00	0.00	0.00	0.00	1ST BONE SPRING SAND
7879.50	0.00	0.00	7879.50	0.00	0.00	0.00	0.00	KOP
7900.00	2.46	93.64	7899.99	-0.03	0.44	0.44	12.00	
7925.00	5.46	93.64	7924.93	-0.14	2.16	2.17	12.00	
7950.00	8.46	93.64	7949.74	-0.33	5.19	5.20	12.00	
7975.00	11.46	93.64	7974.36	-0.60	9.50	9.52	12.00	
8000.00	14.46	93.64	7998.72	-0.96	15.09	15.13	12.00	
8025.00	17.46	93.64	8022.76	-1.40	21.95	22.00	12.00	
8050.00	20.46	93.64	8046.40	-1.91	30.06	30.12	12.00	
8075.00	23.46	93.64	8069.58	-2.51	39.39	39.47	12.00	
8100.00	26.46	93.64	8092.25	-3.18	49.92	50.02	12.00	
8125.00	29.46	93.64	8114.32	-3.92	61.61	61.74	12.00	
8150.00	32.46	93.64	8135.76	-4.74	74.45	74.60	12.00	
8159.83	33.64	93.64	8144.00	-5.08	79.79	79.95	12.00	2ND BONE SPRING SAND
8175.00	35.46	93.64	8156.49	-5.62	88.38	88.56	12.00	
8200.00	38.46	93.64	8176.47	-6.58	103.38	103.59	12.00	
8225.00	41.46	93.64	8195.63	-7.60	119.40	119.64	12.00	
8250.00	44.46	93.64	8213.92	-8.68	136.40	136.68	12.00	
8275.00	47.46	93.64	8231.30	-9.82	154.34	154.65	12.00	
8300.00	50.46	93.64	8247.71	-11.02	173.15	173.50	12.00	
8325.00	53.46	93.64	8263.11	-12.27	192.80	193.19	12.00	
8350.00	56.46	93.64	8277.47	-13.57	213.23	213.66	12.00	
8375.00	59.46	93.64	8290.73	-14.91	234.37	234.85	12.00	
8400.00	62.46	93.64	8302.86	-16.30	256.18	256.70	12.00	
8425.00	65.46	93.64	8313.84	-17.73	278.60	279.16	12.00	
8450.00	68.46	93.64	8323.62	-19.19	301.55	302.16	12.00	
8475.00	71.46	93.64	8332.18	-20.68	324.99	325.65	12.00	
8500.00	74.46	93.64	8339.51	-22.20	348.84	349.55	12.00	
8525.00	77.46	93.64	8345.57	-23.74	373.04	373.80	12.00	
8550.00	80.46	93.64	8350.36	-25.29	397.53	398.33	12.00	
8575.00	83.46	93.64	8353.86	-26.87	422.23	423.08	12.00	
8600.00	86.46	93.64	8356.05	-28.45	447.08	447.98	12.00	
8621.47	89.04	93.64	8356.90	-29.81	468.49	469.43	12.00	TARGET ZONE SBSG
12907.93	89.04	93.64	8429.00	-302.00	4746.30	4755.90	0.00	EOL

Bueno BUE Federal Com #1H





Bueno BUE Federal Com #1H Cement Contingency

Yates Petroleum Corporation requests the use of a contingency cement plan if hole conditions warrant for the production interval as follows:

DV/Packer stage tool at approx. 5200'-5700' (cement volumes will be adjusted per tool placement)

Stage I: Lead w/275sx 35/65 Poz C (YLD 2.0, WT 12.5, 11 gal/sk) Tail w/1500sx PVL (YLD 1.3, WT 13.5, 6.145 gal/sk) TOC approx. 5200'
Stage II: Lead w/475sx 35/65 Poz C (YLD 2.0, WT 12.5, 11 gal/sk) Tail w/205 50/50 Poz C (YLD 1.34, WT 14.2, 6.2 gal/sk) TOC approx. 1600'

All volumes are calculated at 35% excess. Casing weight and grade will remain the same.

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

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

Specifications

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

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***
Phillip Hightower	**12/11/2013**

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	Tested By	Approved By
12/11/2013		

M12653

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 11, 2013

Customer: Cactus

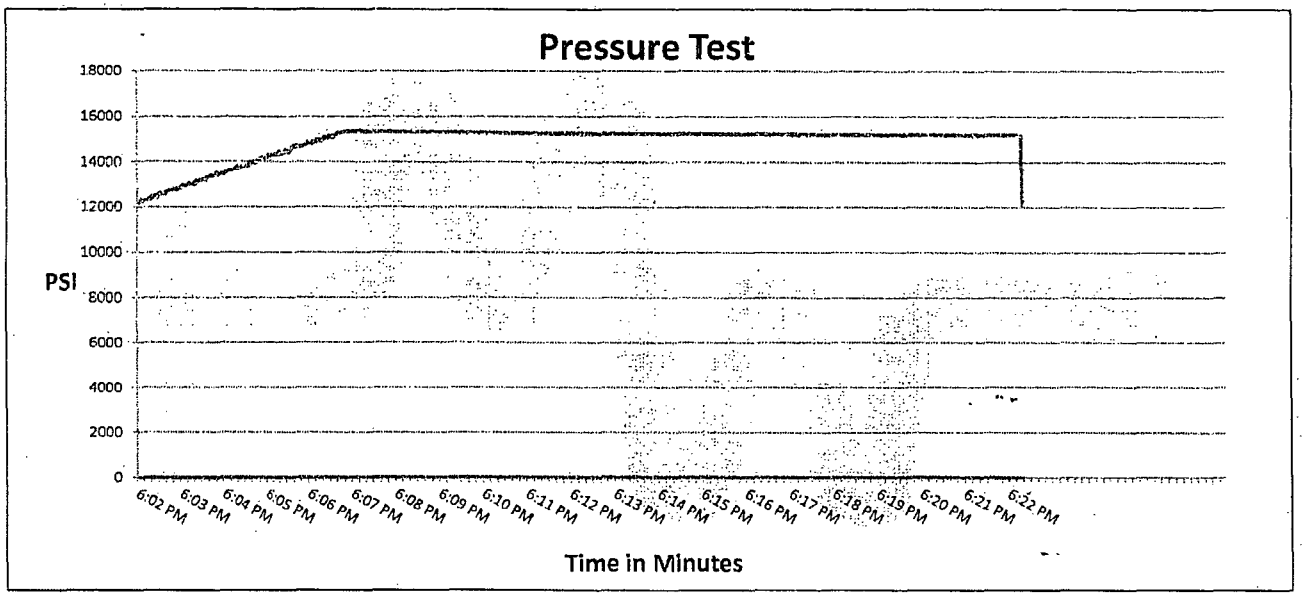
Pick Ticket #: 229391

Hose Specifications

Hose Type	Length
Mud	35'
I.D.	**O.D.**
4"	6.13"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	**Final O.D.**
6.62"	6.66"
Hose Serial #	**Hose Assembly Serial #**
11060	229391



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	16 2/4 Minutes		15483 PSI

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

Tested By: *Tony Kellington*

x Tony Kellington

Approved By: *Phil Maytubby*

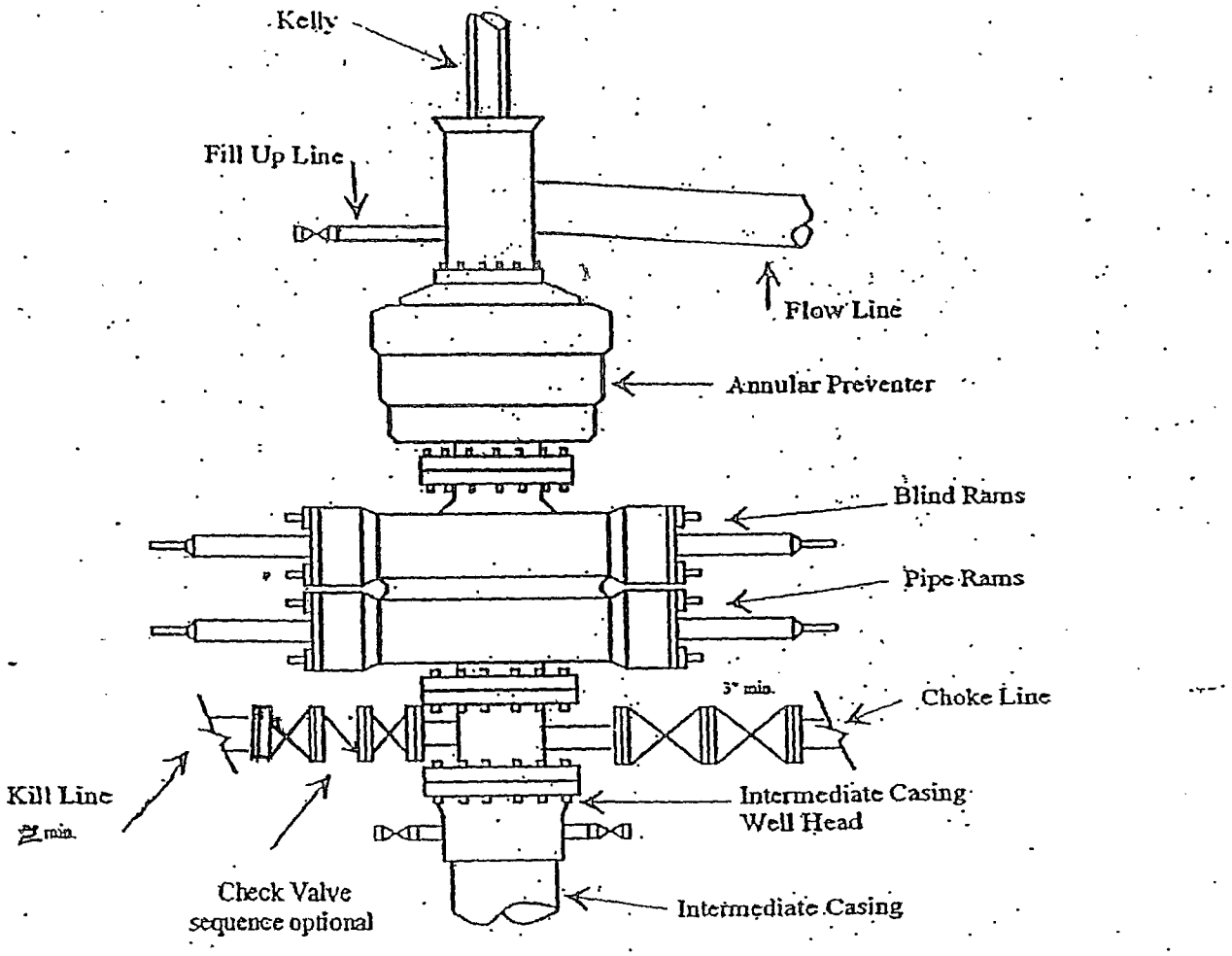
x Phil Maytubby

Yates Petroleum Corporation

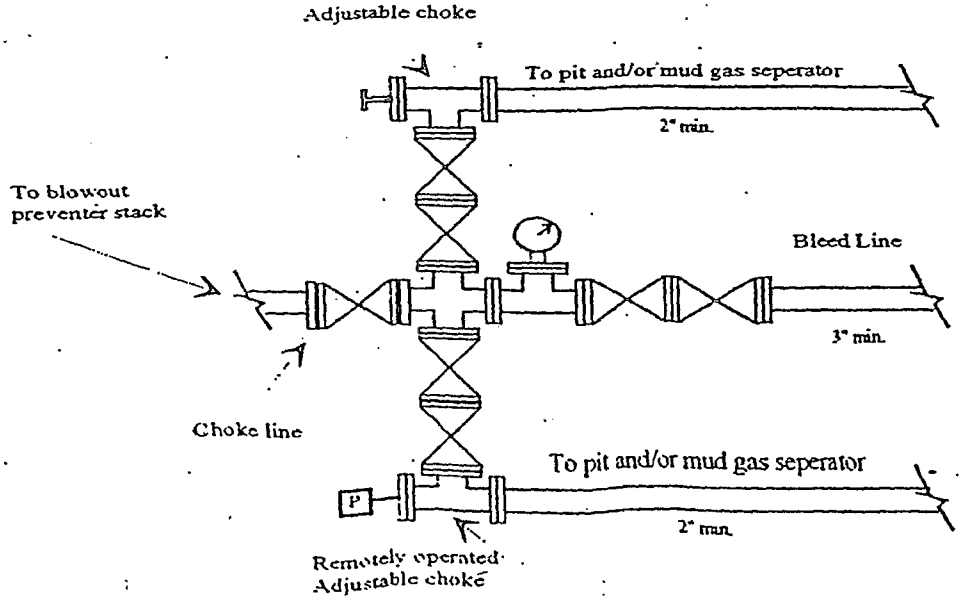
BOP-3

Exhibit

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

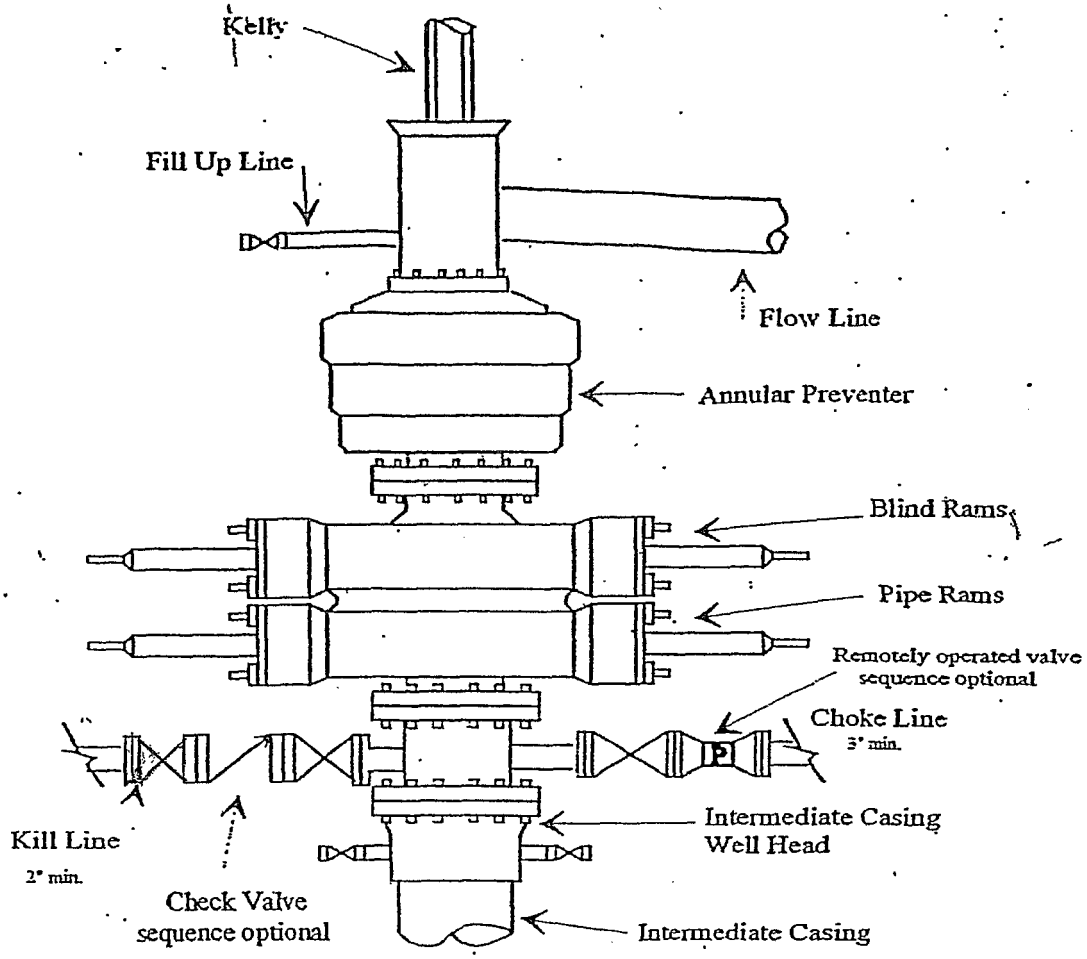


Typical 3,000 psi choke manifold assembly with at least these minimun features

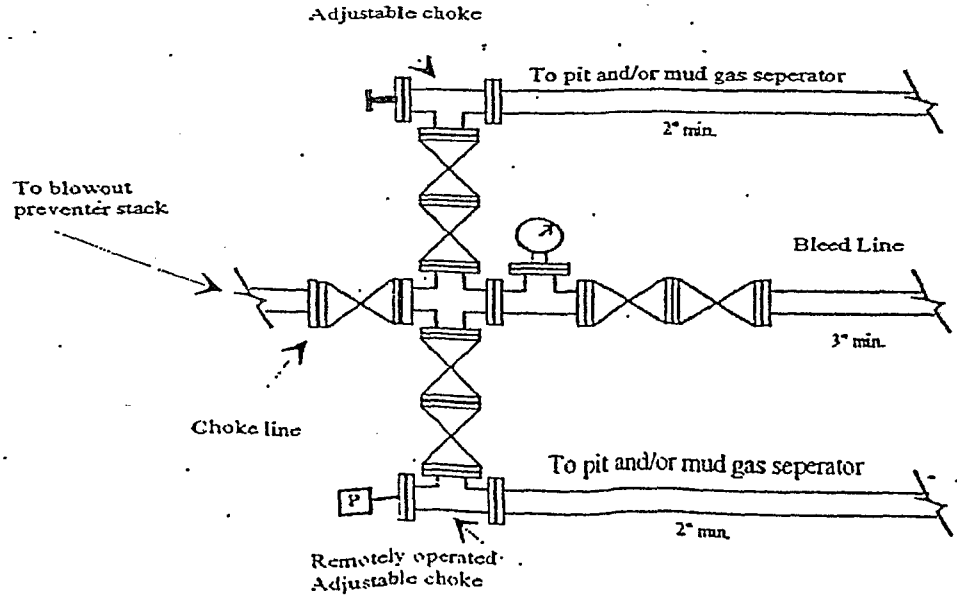


Yates Petroleum Corporation

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



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



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

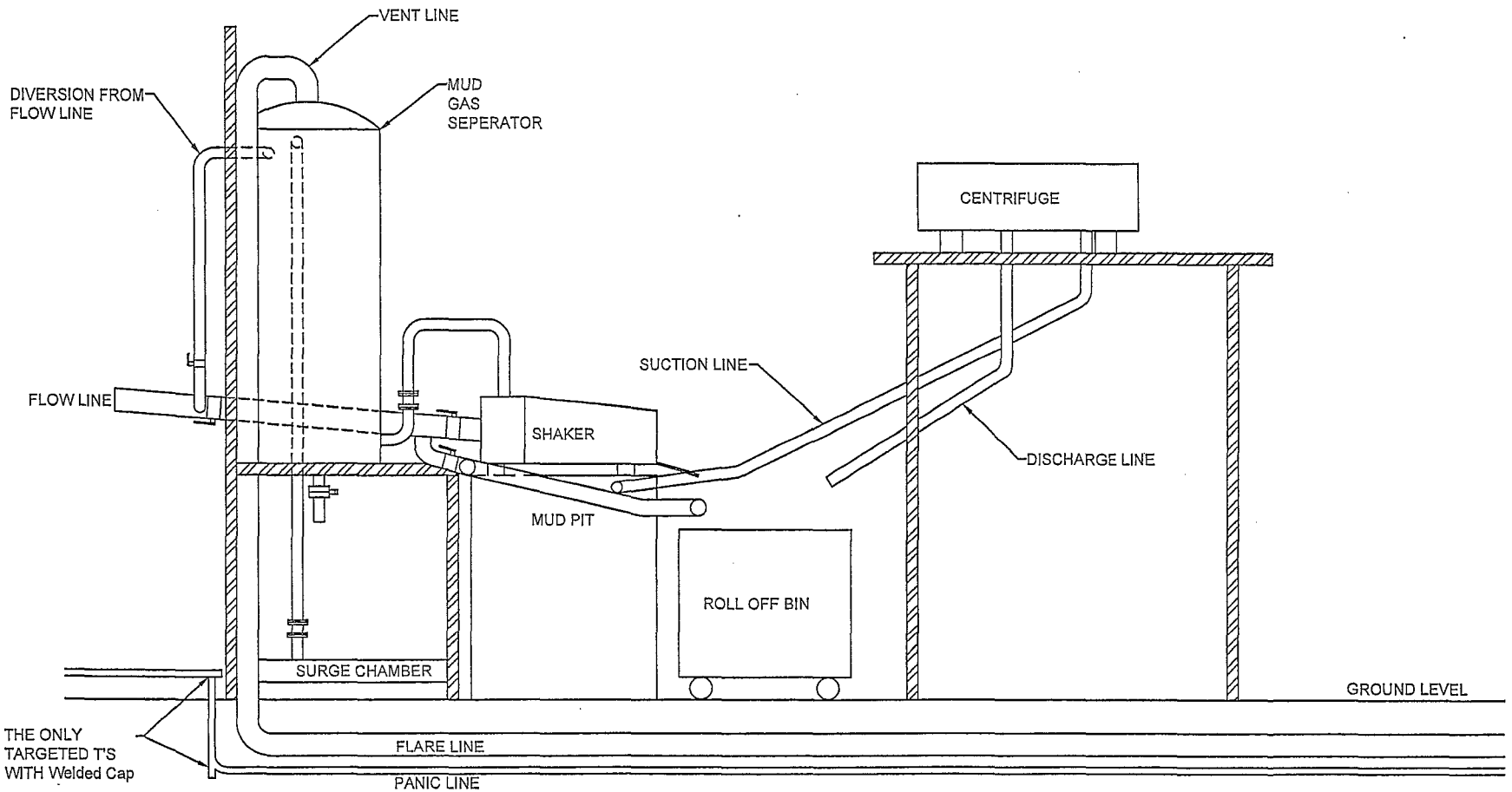
All equipment will be inspected at least hourly by rig personnel and daily by contractors' personnel.
Any spills / leaks will be reported to YPC, NMOCD, and cleaned up without delay.

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

Piping from Choke Manifold
to the Closed Loop Drilling Mud System



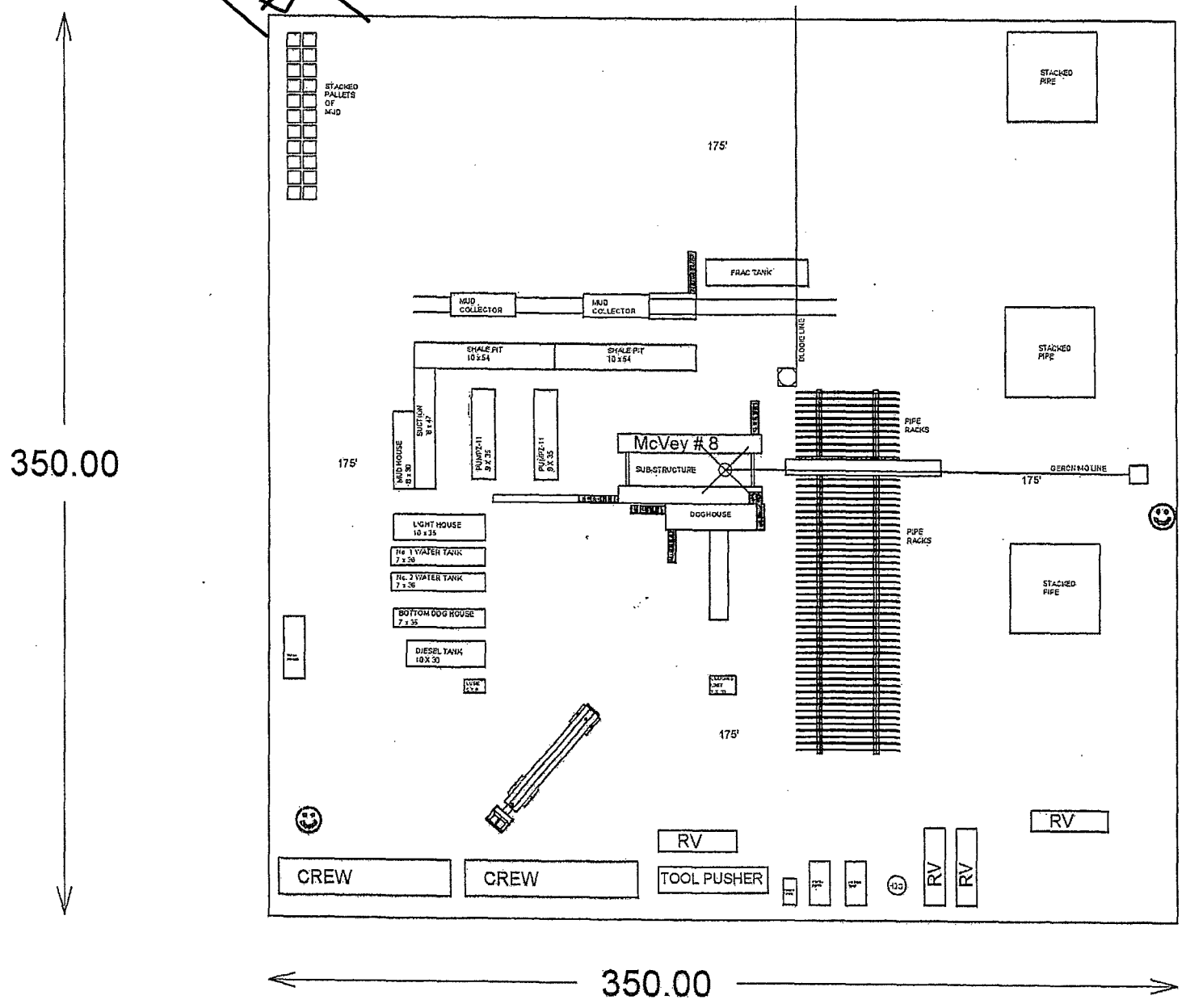
The flare discharge must be 100' from wellhead for non H2S wells and 150' from wellhead for wells expected to encounter H2S.

YATES PETROLEUM CORPORATION

McVay # 8

12-16-13

Rig Plat #1



Safe Briefing Area with caution signs and breathing equipment

Wind Direction Indicators

H2S Monitor with alarm at the bell nipple

PAD LAYOUT

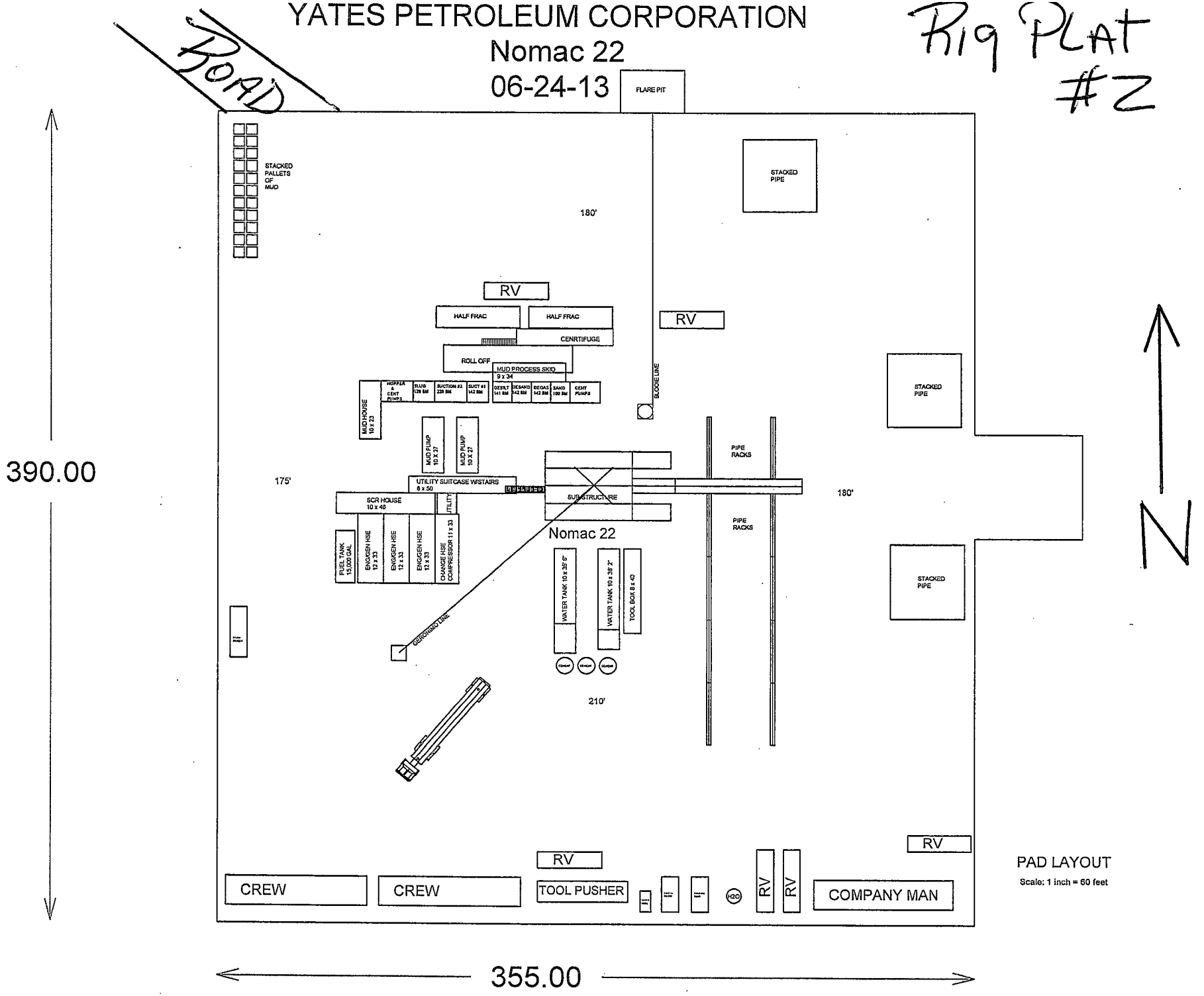
Scale: 1 inch = 60 feet

YATES PETROLEUM CORPORATION

Nomac 22

06-24-13

Rig Plat #2



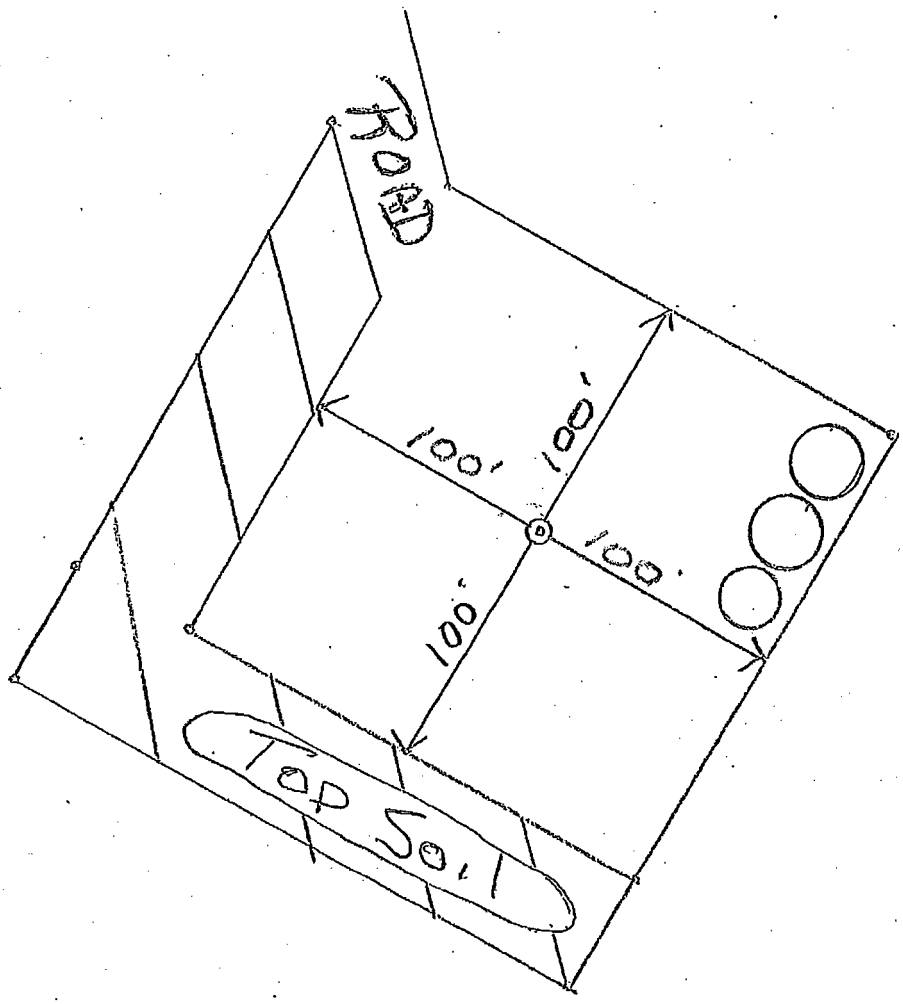
PAD LAYOUT

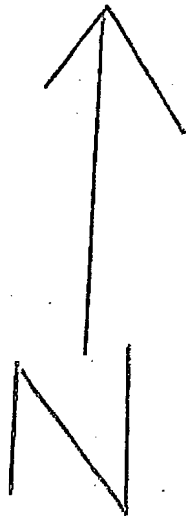
Scale: 1 inch = 60 feet

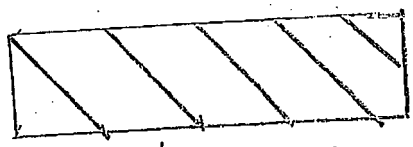
1H #1H

Reclamation PLAT

Bueno BUE Federal Com. #1H







Reclaimed Area

POINT SURFACE USE AND OPERATIONS PLAN
Yates Petroleum Corporation
Bueno BUE Federal Com. #1
965' FSL & 234' FWL Surface Hole Location
660' FSL and 330' FEL Bottom Hole Location
Section. 12, T-20S-R29-E
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 wellsite is located approximately 16 miles northeast of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

From Carlsbad, go east on Highway 62/180 for approximately 14.1 miles to the intersection of Highway 62/180 and Burton Flats Road. Turn left on Burton Flats Road and go approximately 3.8 miles. Turn right here on lease road and go approximately .9 of a mile to the northwest corner of the proposed well location.

2. PLANNED ACCESS ROAD.

A. Coming off of the existing lease road the proposed new access will angle to the southeast for approximately 200 feet to the northwest corner of the well location. Please note survey plat showing the road route.
B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion. 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 wellsite.
B. The exibit shows existing wells within a one-mile radius of the proposed wellsite.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. There are production facilities on this lease at the present time.
The necessary production facilities for this well will be constructed in the northeast corner of the well location. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

The location will be reduced to 200' x 200' 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. The location will be re-contoured as close to the original lands as possible before construction was begun. **V-Door will be to the west side of the location.** Please note attached Reclamation Plat.

A. 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.

B. The reclamation of the pad will be done in sixty days if possible after the well is put in production.

A. State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the "Pit Rule" 19.15.17 NMAC.
B. 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 wellsite in as aesthetically pleasing a condition as possible.

B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.
C. If the proposed well is non-productive, all rehabilitation and/or vegetation equirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level after they have evaporated and drie accomplished as expeditiously as possible. All pits will be filled level after they have evaporated and dried.

11. SURFACE OWNERSHIP:

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

Mineral Estate: Federal Lease NM-313550
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.:	NM0313550
WELL NAME & NO.:	1H-Bueno BUE Federal Com
SURFACE HOLE FOOTAGE:	660'/S & 330'/E
BOTTOM HOLE FOOTAGE	965'/S & 234'/W
LOCATION:	Section 12, T. 20 S., R. 29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Range waterline

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

Watershed

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

Tank Battery COAs Only:

- Tank battery locations 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.
- Automatic shut off, check values, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

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 pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad.

Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.
A closed mud system using steel tanks for all cuttings and fluids is required. All fluids and cuttings will be hauled off site for disposal. No pits are allowed.

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

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

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

Cave/Karst Subsurface Mitigation

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

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

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

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

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-

bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

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

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

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.

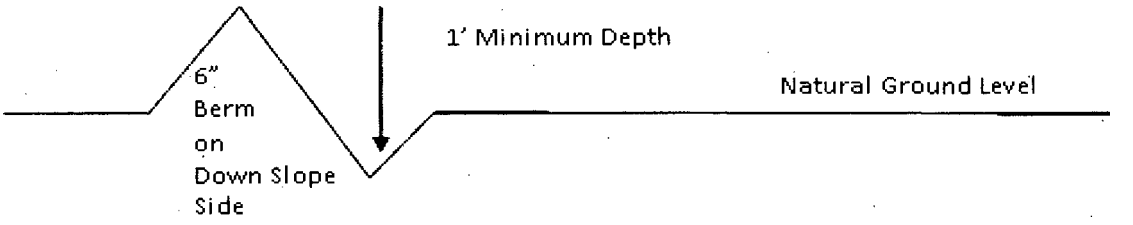
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

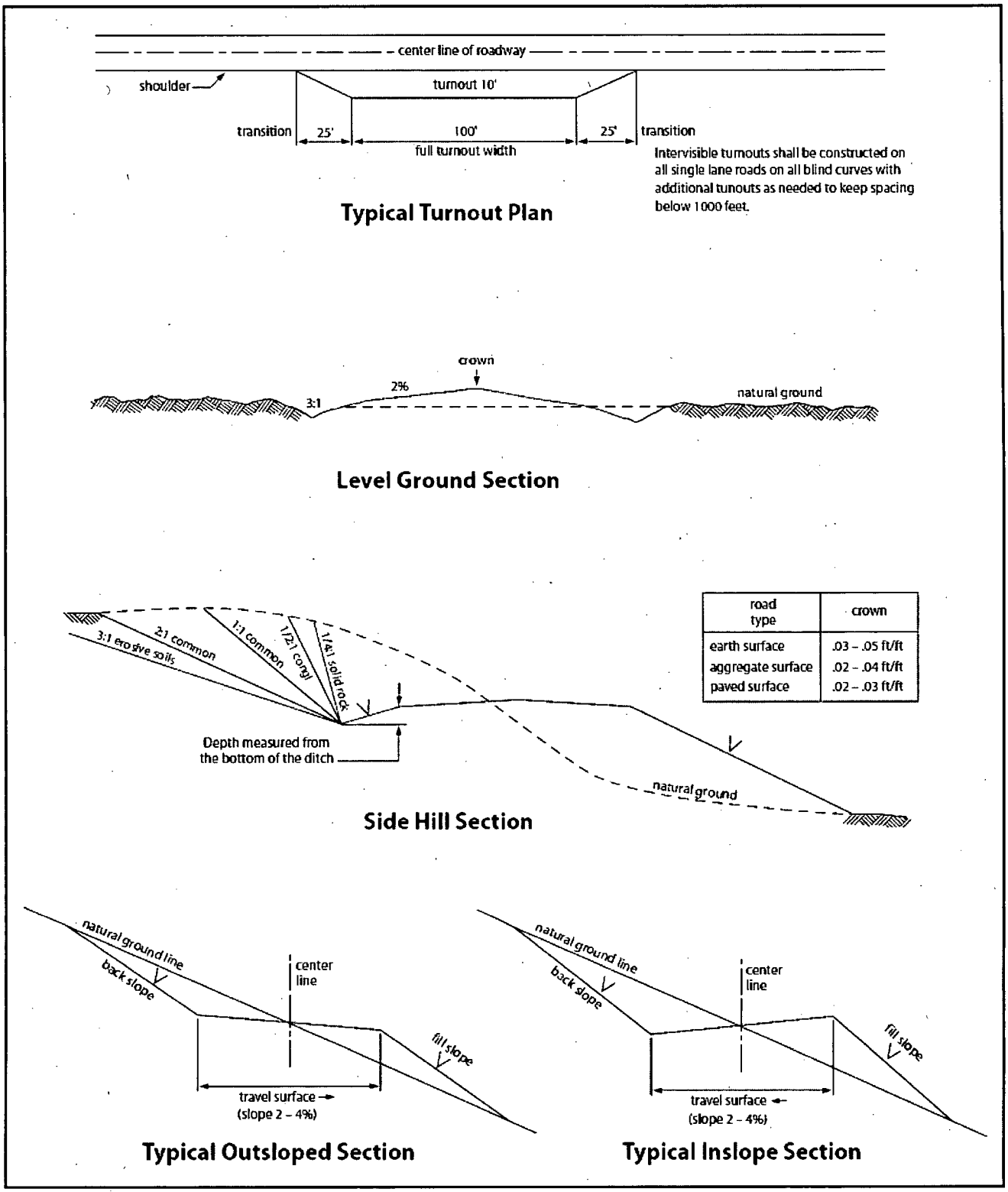


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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. **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 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, 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 Potash Areas:
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 for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

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

Secretary's Potash
High Cave/Karst
Capitan Reef
Possible water flows in the Salado and Artesia Group.
Possible lost circulation in the Artesia Group, Rustler, Capitan Reef, and 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.

1. The **20** inch surface casing shall be set at approximately **360** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **13-3/8** inch 1st intermediate casing is:

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

3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is:
   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Capitan Reef and potash.**

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   Option #1:
   ☒ Cement should tie-back at least **50 feet above the Capitan Reef** (Top of Capitan Reef estimated at 1824'). Operator shall provide method of verification.

Option #2:

Operator has proposed DV tool at depth of 5200', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

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

b. Second stage above DV tool:
☒ Cement should tie-back at least **50 feet above the Capitan Reef** (Top of Capitan Reef estimated at 1824'). Operator shall provide method of verification

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

C. PRESSURE CONTROL

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

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

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
    a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
    d. The results of the test shall be reported to the appropriate BLM office.
    e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
    f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

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

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

MHH 10172016

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).

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 1 for Loamy Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed shall 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 shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

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

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

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

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.