NM OIL CONSERVATION
ARTESIA DISTRICT

Carlsbad Field Office
OCD Artesia

JUL 10 2017

RECEIVED

ATS-15-395

Form 3160-3
(March 2012)

R-111-POTASH

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NM-85891
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator ~~YATES PETROLEUM CORPORATION~~ EOG Y Resources 25575	7. If Unit or CA Agreement, Name and No. N/A
3a. Address 105 South Fourth Street, Artesia, New Mexico 88210	8. Lease Name and Well No. Knoll AOK Federal #4H 15751
3b. Phone No. *(include area code)* 575-748-4347	9. API Well No. 30-015-44300
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*	10. Field and Pool, or Exploratory ~~Nash Draw, SW~~ Cedar Canyon, Bone Spring
At surface 430' FNL & 480' FEL, NENE Sec. 3, T24S-R29E	11. Sec., T. R. M. or Blk. and Survey or Area Section 3, T24S-R29E
At proposed prod. zone 660' FSL & 330' FWL, NWNW Sec. 3, T24S-R29E	
14. Distance in miles and direction from nearest town or post office* Approximately 6 miles east of Malaga, 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) 430'	16. No. of acres in lease 318.62 / 17. Spacing Unit dedicated to this well N2N2, Sec. 3-T24S-R29E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 100'	19. Proposed Depth 13197 / 8924 / 20. BLM/BIA Bond No. on file Nationwide Bond #NM-B000434 NMB000920
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start* 01/01/2015 / 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:

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 Cowan	Date 2/5/15
Title Land Regulatory Agent		
Approved by *(Signature)* /s/Cody Layton	Name *(Printed/Typed)* FIELD MANAGER	Date JUL 3 - 2017
Title	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)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

C-8-4-14

CERTIFICATION
YATES PETROLEUM CORPORATION
Knoll AOK Federal #4H

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 5th day of February 2015

Signature Cy Cowan

Name Cy Cowan

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

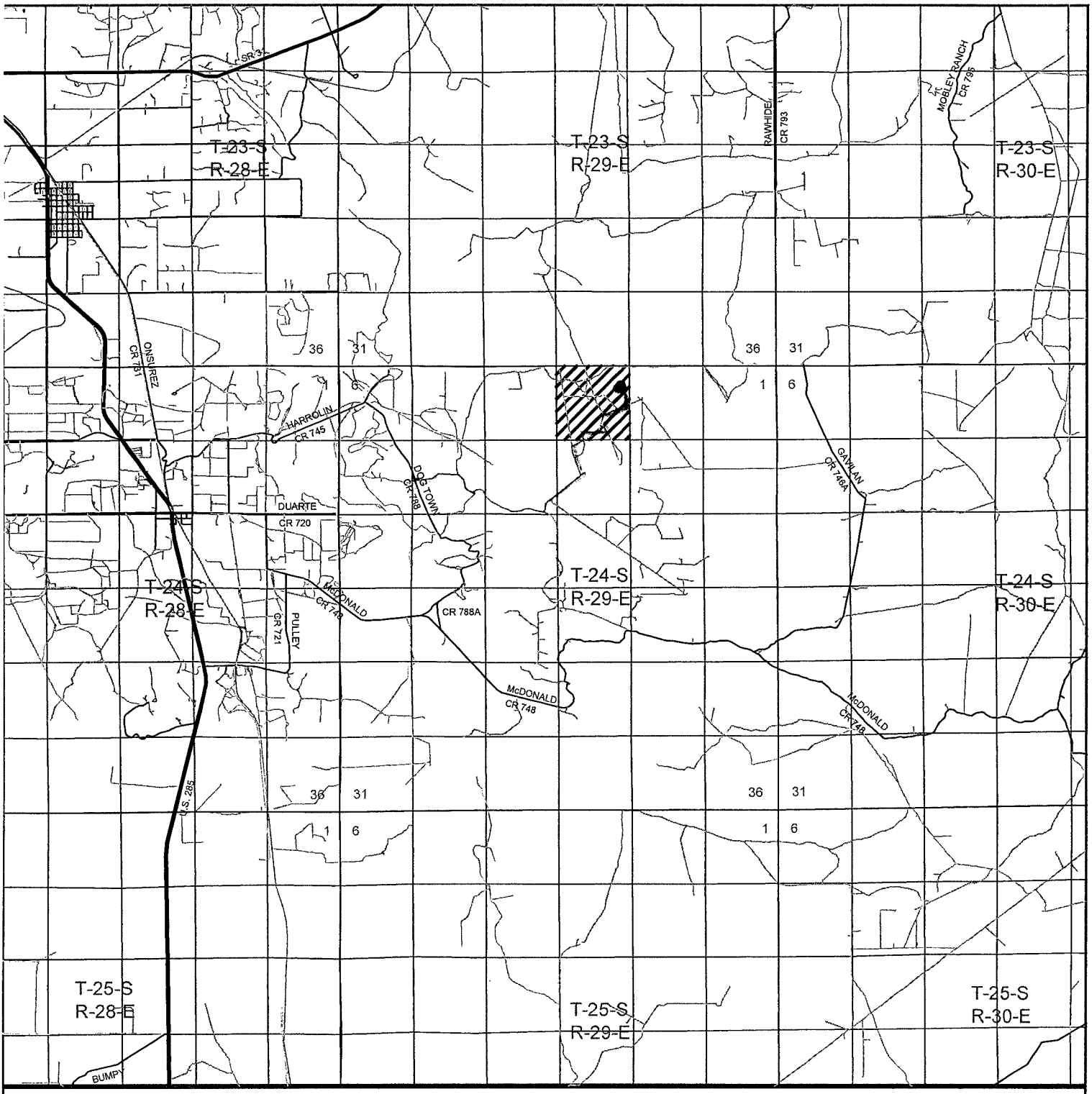
Telephone (505) 748-4372

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

Address (if different from above) Same as above.

Telephone (if different from above) (505) 748-4221

E-mail (optional)



KNOLL "AOK" FEDERAL #4H
Located 430' FNL and 480' FEL
Section 3, Township 24 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

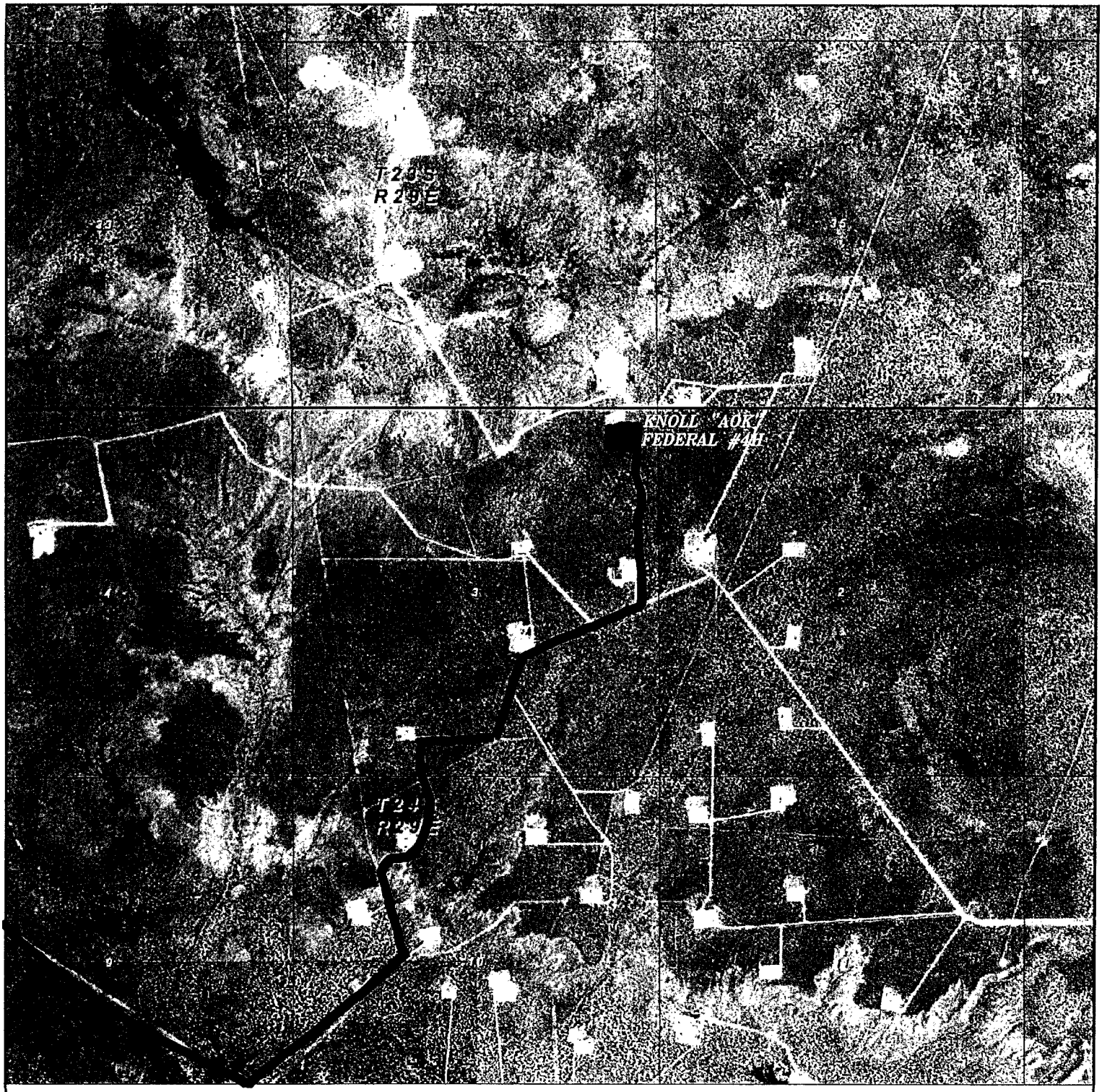
basin
focused on excellence in the oilfield

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: JMS 24192
Survey Date: 02-22-2011
Scale: 1" = 2 Miles
Date: 02-24-2011

N

YATES PETROLEUM CORP.



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W.O. Number: JMS 24192

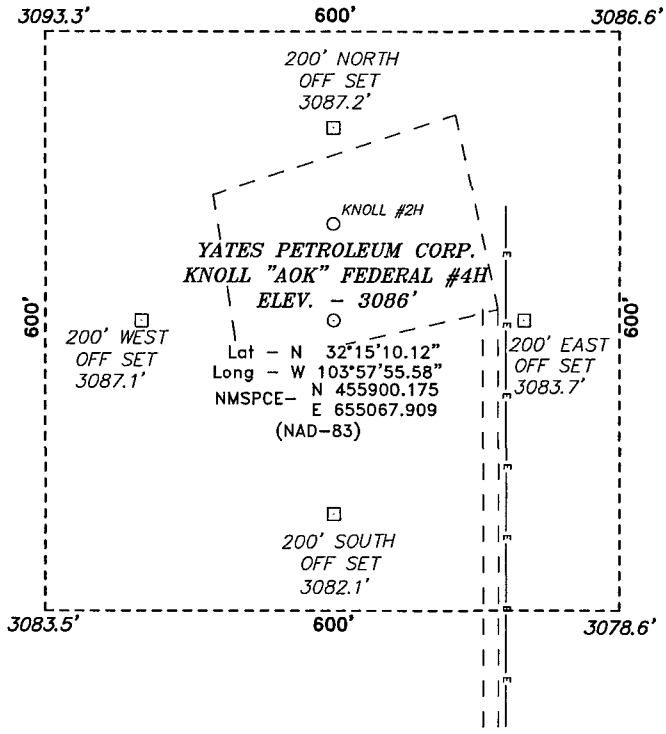
Scale: 1" = 2000'

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

N

YATES PETROLEUM CORP.

SECTION 3, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

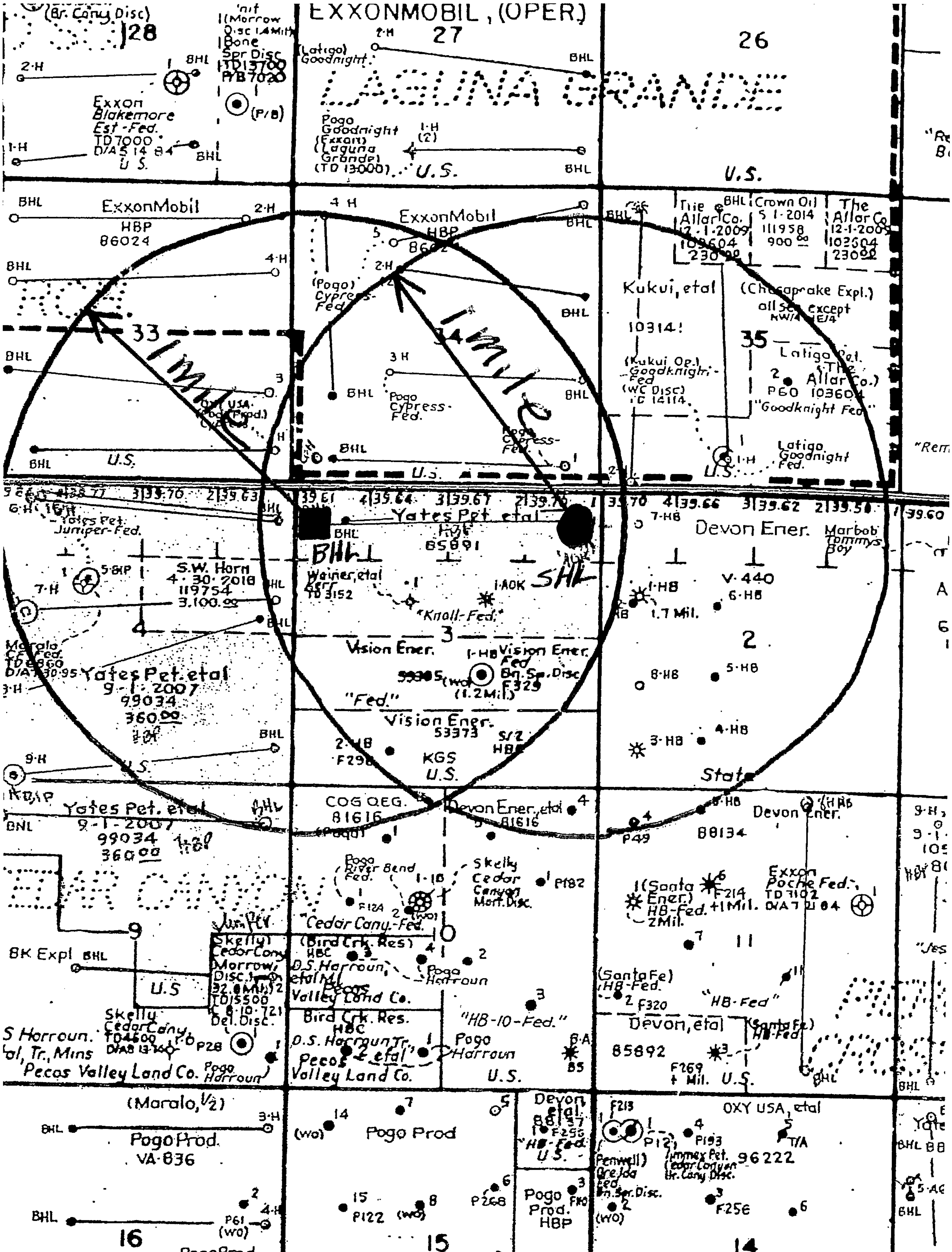
YATES PETROLEUM CORP.

REF: KNOLL "AOK" FEDERAL #4H / WELL PAD TOPO

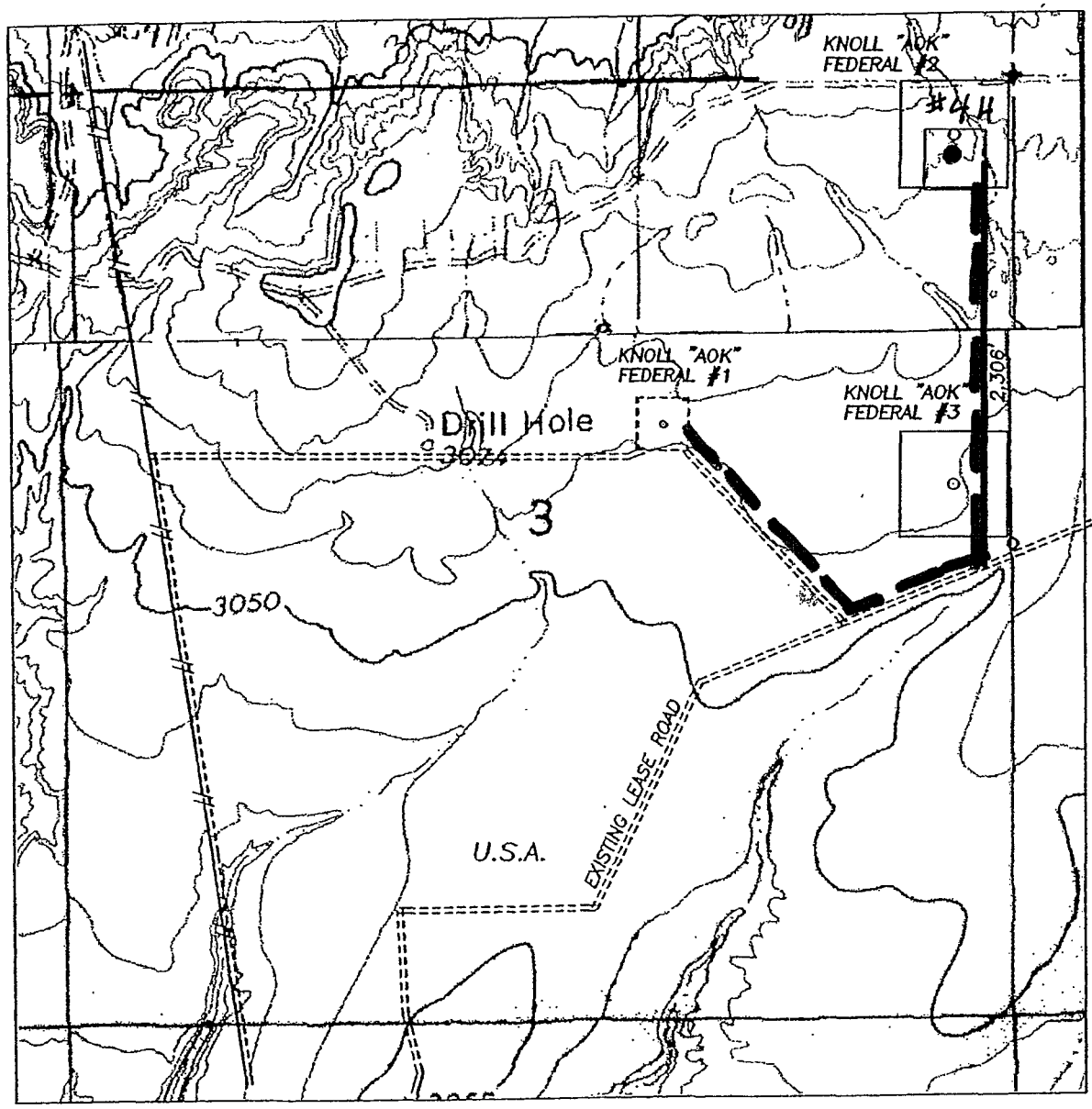
THE KNOLL "AOK" FEDERAL #4H LOCATED 430'
FROM THE NORTH LINE AND 480' FROM THE EAST LINE OF
SECTION 3, TOWNSHIP 24 SOUTH, RANGE 29 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 24192	Drawn By: J. SMALL		
Date: 02-24-2011	Disk: JMS 24192	Survey Date: 02-22-2011	Sheet 1 of 1 Sheets


EXXONMOBIL, (OPER.)
LAGUNA GRANDE
Exxon Blakemore Est.-Fed. TD7000 D/A 5 14 84
Pogo Goodnight (Exxon) (Laguna Grande) (TD 13000)
U.S.
ExxonMobil HBP 86024
ExxonMobil HBP 86024
The Allar Co. 12-1-2009 103604 230
Crown Oil 5-1-2014 111958 900
Kukui, etal 103141
(Chesapeake Expl.)
Latigo Pet. (The Allar Co.)
"Goodknight Fed."
Latigo Goodnight Fed.
Pogo Cypress-Fed.
1 Mile
1 Mile
Yates Pet. etal HBP 85891
BHL
SHL
Devon Ener.
V-440
1.7 Mil.
S.W. Horn 4-30-2018 119754 3,100.00
Yates Pet. etal 9-1-2007 99034 360.00
Vision Ener.
"Knoll-Fed."
"Fed."
Vision Ener. 53373
KGS
U.S.
State
COG OEG. 81616
Devon Ener. etal 81616
Devon Ener. 88134
Yates Pet. etal 9-1-2007 99034 360.00
Skelly Cedar Canyon Morr. Disc.
"Cedar Cany.-Fed."
(Bird Crk. Res.)
D.S. Harroun, etal M.I.
Pecos Valley Land Co.
Exxon Poche Fed.
(Santa Fe) HB-Fed.
"HB-10-Fed."
"HB-Fed"
Devon, etal 85892
Pecos Valley Land Co.
(Maralo, 1/2)
Pogo Prod. VA-836
Pogo Prod
Pogo Prod. HBP
OXY USA, etal 96222
28 27 26 33 34 35 4 3 2 9 10 11 16 15 14

SECTION 3, TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM, EDDY COUNTY, NEW MEXICO.



Proposed Flowline Route

Existing Lease Roads

1000' 0 1000' 2000'

Scale 1" = 1000'

THE PREPARATION OF THIS PLAT AND THE PERFORMANCE OF THE SURVEY UPON WHICH IT IS BASED WERE DONE UNDER MY DIRECTION AND THE PLAT ACCURATELY DEPICTS THE RESULTS OF SAID SURVEY AND MEET THE REQUIREMENTS OF THE STANDARDS FOR LAND SURVEYS IN NEW MEXICO AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

3640

HERSCHEL L. JONES R.L.S. No.3640

GENERAL SURVEYING COMPANY P.O. BOX 1928
LOVINGTON, NEW MEXICO 88260

YATES PETROLEUM CORP.

Flowline

~~LEASE ROAD~~ TO ACCESS THE YATES KNOLL "AOK" FEDERAL #4H ~~WELL~~, LOCATED IN SECTION 3, TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM, EDDY COUNTY, NEW MEXICO.

Survey Date: 4/10/2006	Sheet 1 of 1 Sheets
Drawn By: Ed Blevins	W.O. Number
Date: 4/12/06	Scale 1" = 1000' KNOLL 2&3

YATES PETROLEUM CORPORATION
Knoll "AOK" Federal #4-H
430' FNL and 480' FEL Surface Hole Location
660' FNL & 330' FWL Bottom Hole Location
Section 3-T24S-R29E
Eddy County, New Mexico

DRILLING INFORMATION

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

Rustler	356'	Brushy Canyon Mkr	6540' Oil
Top of Salt	637'	Bone Springs LM	6839' Oil
Base of Salt	3061'	Bone Springs 1/SD	7050' Oil
Bell Canyon	3139' Oil	Bone Springs 2/SD	8802' Oil
Cherry Canyon	3998' Oil	Bone Springs 2Target	9196' Oil
Brushy Canyon	5233' Oil	MD 13197' TVD 8924'	

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

   Water: 0' – 450'
   Oil or Gas: Oil Zones: See above –all potential zones

3. Pressure Control Equipment: A 3000 PSI BOP with a 13 5/8" opening will be installed on the 13 3/8" casing and a 5000 PSI BOP will be installed on the 9 5/8" casing. 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.

Operator request Flex hose

4. 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 casing to be used

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
30"	20"	94#	H-40	ST&C	25'-85'	60'
17.5"	13.375"	48#	J-55	ST&C	0'-400'	400'
12.25"	9.625"	36#	K-55	LT&C	0-3100'	3100'
8.75"	5.5"	17#	P- 110	Buttress Thread	0'-9196'	9196'
8.5"	5.5"	17#	P-110	Buttress Thread	9196'-13197'	4001'

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

Hole drilled vertically to 8446' and kicked off at 12 degrees per 100'with a 8.75" hole to 9196' MD (8924 TVD). Hole size will be reduced to 8.5" and drilled to 13197' MD (8924' TVD) where 5.5" casing will be set and cemented to surface in a single stage with a 2 stage cement contingency. Penetration point of the producing zone will be encountered at 454' FNL & 957' FEL in Section 3, T24S-R29E. Deepest TVD is 8924' in the lateral.

B. CEMENTING PROGRAM:

Surface Cement (0'-400'): Lead with 415 sacks of Class C plus 2% CaCl2 (Wt. 14.8, Yld. 1.34, WTR 6.30 gal/sack). This is designed with 100% excess, TOC is surface.

Intermediate Cement (0'-3100'): Lead with 830 sacks of Class 35:65:6 PzC (WT 12.5, YLD 2.0, WTR 11.0 gal/sack); tail in with 210 sacks of Class C (WT 14.8, YLD 1.34, H2O 6.3 gal/sack). Designed with 100% excess, TOC is surface.

Production Casing: (0'-13197'): Lead with 1110 sacks of Class Lite Crete (WT. 9.0, YLD 2.73, WTR 8.98 gal/sack) with the additives being; .03 gal/sack D177 Retarder, .2% D046 Anti Foam, .1% D065 Dispersant, 39 lb./sack D124 Extender. Tail in with 1220 sacks of Pecos Valley Lite (WT. 13.5, YLD 1.35, WTR 6.10 gal/sack) additives include; .4% D112 Fluid Loss, 22.5 lb. /sack D151 CaCO3, 1.5 lb. /sack D174 Extender, .01 lb. /sack D177 Retarder, .6 lb. /sack D800 Retarder, .15 lb./sack D46 Antifoam Agent, 3 lbs./sack D042 LCM Extender, 1% D044 Salt, .125 lb./sack D130 LCM, 2% D167 Fluid Loss Material.

Please note attached contingency program.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

Interval	Type	Weight	Viscosity	Fluid Loss
85'-400'	Fresh Water	8.60-9.20	28-34	N/C
400'-3100'	Brine Water	10.00-10.20	28-29	N/C
3100'-13197'	Cut Brine	8.80-9.20	32-34	N/C

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations. Rig personnel will check mud hourly.

7. EVALUATION PROGRAM:

Samples: Thirty foot samples to 3100'. Every 10' from 3100' to TD
Logging: Platform Hals; for shallow control
Coring: None anticipated
DST's: None Anticipate
Mud logging: Yes: From 3000' to TD.

8. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:
Maximum Anticipated BHP:

0'-400'	191 PSI
400'-3100'	1644 PSI
3100'-8924'	4269 PSI

Abnormal Pressures Anticipated: None
Lost Circulation Zones Anticipated: None.
H2S is not anticipated

9. 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 45 days.

Knoll AOK Federal #4H 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. 4500'-5000' (cement volumes will be adjusted per tool placement)

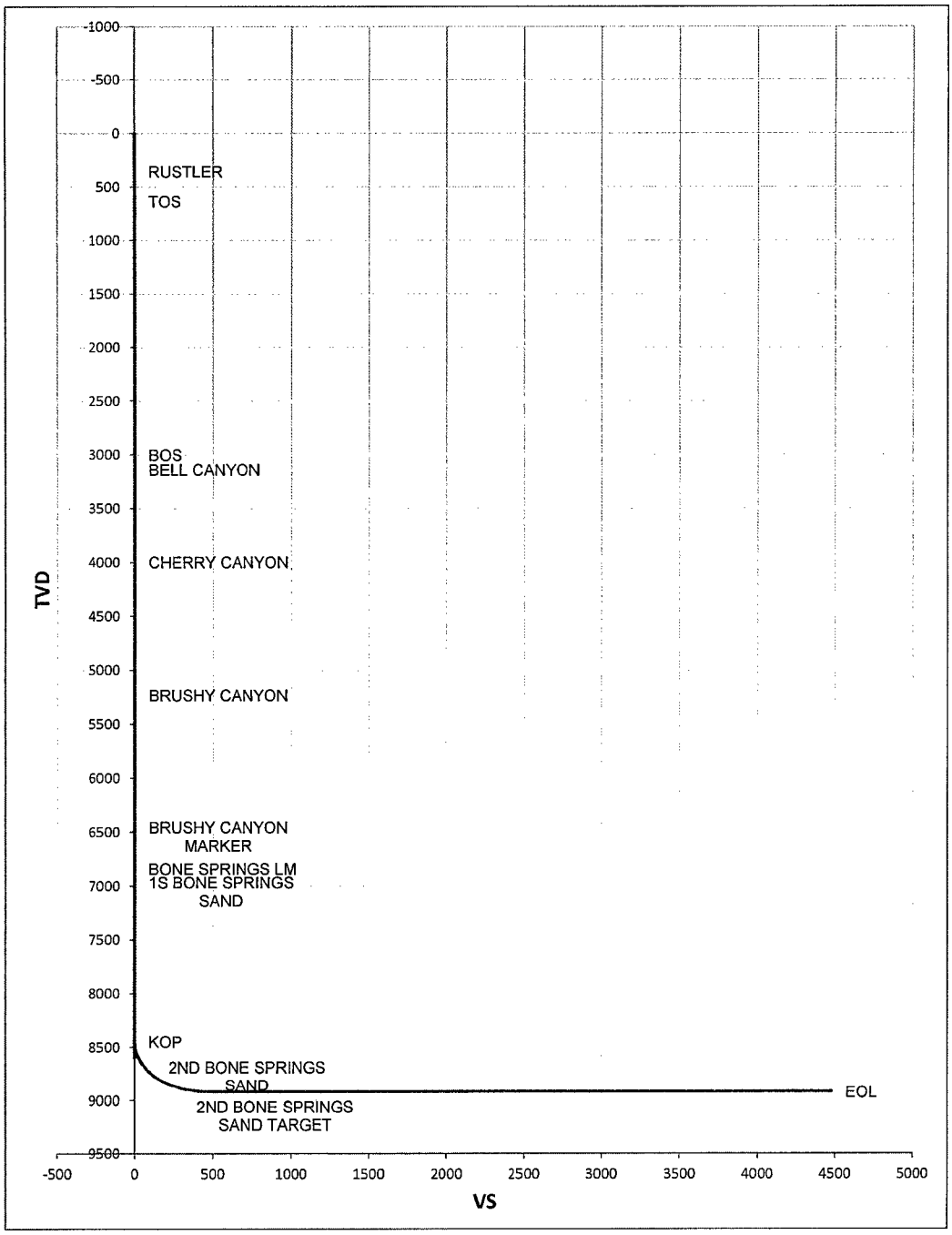
Stage I: Lead w/665sx 35/65 Poz C (YLD 2.0, WT 12.5, 11 gal/sk) Tail w/1160sx PVL (YLD 1.3, WT 13.5, 6.145 gal/sk) TOC approx. 4500'
Stage II: Lead w/630 35/65 Poz C (YLD 2.0, WT 12.5, 11 gal/sk) Tail w/205 50/50 Poz C (YLD 1.34, WT 14.2, 6.2 gal/sk) TOC= 0'

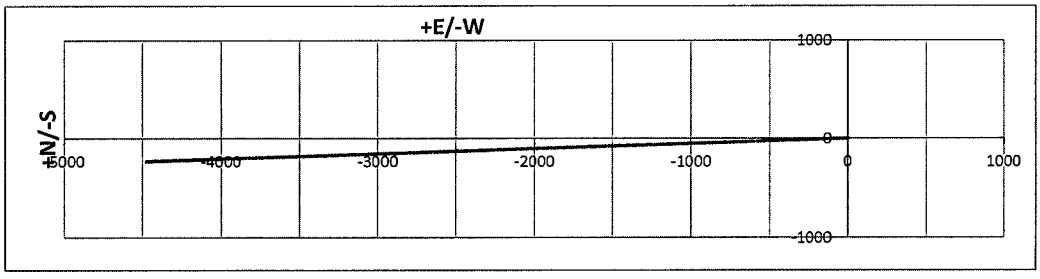
All volumes are calculated at 35% excess. Casing weight and grade will remain the same.

Well Name:	Knoll AOK Federal #4H	**Tgt N/-S:**	-229.74		
		Tgt E/-W:	-4472.47	**EOC TVD/MD:**	8924.00 / 9196.54
Surface Location:	Section 3 , Township 24S Range 29E	**VS:**	4478.36		
Bottom Hole Location:	Section 3 , Township 24S Range 29E	**VS Az:**	267.06	**EOL TVD/MD:**	8924.00 / 13197.44

MD	Inc.	Azi.	TVD	+N/-S	+E/-W	VS	DLS	Comments
0	0	0	0	0	0	0	0	
356.00	0.00	0.00	356.00	0.00	0.00	0.00	0.00	RUSTLER
637.00	0.00	0.00	637.00	0.00	0.00	0.00	0.00	TOS
3061.00	0.00	0.00	3061.00	0.00	0.00	0.00	0.00	BOS
3139.00	0.00	0.00	3139.00	0.00	0.00	0.00	0.00	BELL CANYON
3998.00	0.00	0.00	3998.00	0.00	0.00	0.00	0.00	CHERRY CANYON
5233.00	0.00	0.00	5233.00	0.00	0.00	0.00	0.00	BRUSHY CANYON
6540.00	0.00	0.00	6540.00	0.00	0.00	0.00	0.00	BRUSHY CANYON MARKER
6839.00	0.00	0.00	6839.00	0.00	0.00	0.00	0.00	BONE SPRINGS LM
7050.00	0.00	0.00	7050.00	0.00	0.00	0.00	0.00	1S BONE SPRINGS SAND
8446.54	0.00	0.00	8446.54	0.00	0.00	0.00	0.00	KOP
8450.00	0.42	267.06	8450.00	0.00	-0.01	0.01	12.00	
8475.00	3.42	267.06	8474.98	-0.04	-0.85	0.85	12.00	
8500.00	6.42	267.06	8499.89	-0.15	-2.99	2.99	12.00	
8525.00	9.42	267.06	8524.65	-0.33	-6.42	6.43	12.00	
8550.00	12.42	267.06	8549.19	-0.57	-11.15	11.17	12.00	
8575.00	15.42	267.06	8573.46	-0.88	-17.16	17.18	12.00	
8600.00	18.42	267.06	8597.37	-1.25	-24.42	24.45	12.00	
8625.00	21.42	267.06	8620.87	-1.69	-32.92	32.97	12.00	
8650.00	24.42	267.06	8643.90	-2.19	-42.64	42.70	12.00	
8675.00	27.42	267.06	8666.38	-2.75	-53.55	53.62	12.00	
8700.00	30.42	267.06	8688.26	-3.37	-65.62	65.71	12.00	
8725.00	33.42	267.06	8709.48	-4.05	-78.82	78.93	12.00	
8750.00	36.42	267.06	8729.98	-4.78	-93.11	93.23	12.00	
8775.00	39.42	267.06	8749.70	-5.57	-108.45	108.60	12.00	
8800.00	42.42	267.06	8768.59	-6.41	-124.80	124.97	12.00	
8801.91	42.64	267.06	8770.00	-6.48	-126.08	126.25	12.00	2ND BONE SPRINGS SAND
8825.00	45.42	267.06	8786.59	-7.30	-142.12	142.31	12.00	
8850.00	48.42	267.06	8803.67	-8.24	-160.35	160.56	12.00	
8875.00	51.42	267.06	8819.77	-9.22	-179.45	179.69	12.00	
8900.00	54.42	267.06	8834.84	-10.24	-199.37	199.63	12.00	
8925.00	57.42	267.06	8848.85	-11.30	-220.04	220.33	12.00	
8950.00	60.42	267.06	8861.75	-12.40	-241.42	241.74	12.00	
8975.00	63.42	267.06	8873.52	-13.53	-263.45	263.79	12.00	
9000.00	66.42	267.06	8884.12	-14.69	-286.06	286.43	12.00	
9025.00	69.42	267.06	8893.52	-15.88	-309.19	309.60	12.00	
9050.00	72.42	267.06	8901.69	-17.09	-332.78	333.22	12.00	
9075.00	75.42	267.06	8908.62	-18.33	-356.77	357.24	12.00	
9100.00	78.42	267.06	8914.27	-19.58	-381.08	381.59	12.00	
9125.00	81.42	267.06	8918.65	-20.84	-405.66	406.20	12.00	
9150.00	84.42	267.06	8921.73	-22.11	-430.44	431.00	12.00	
9175.00	87.42	267.06	8923.51	-23.39	-455.34	455.94	12.00	
9196.54	90.00	267.06	8924.00	-24.49	-476.84	477.46	12.00	2ND BONE SPRINGS SAND TARGET
13197.44	90.00	267.06	8924.00	-229.74	-4472.47	4478.36	0.00	EOL

Knoll AOK Federal #4H





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 Mayfield	**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

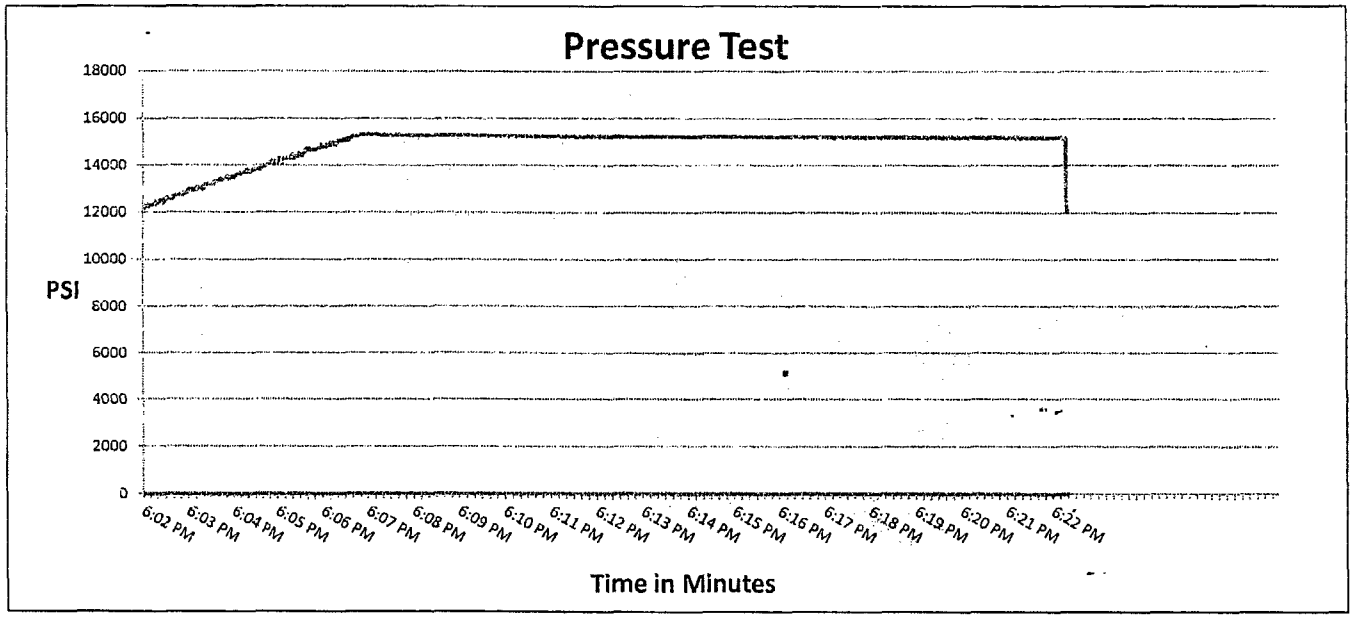
Pick Ticket #: 229391

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 McGee

Approved By: *Phil Maytubby*

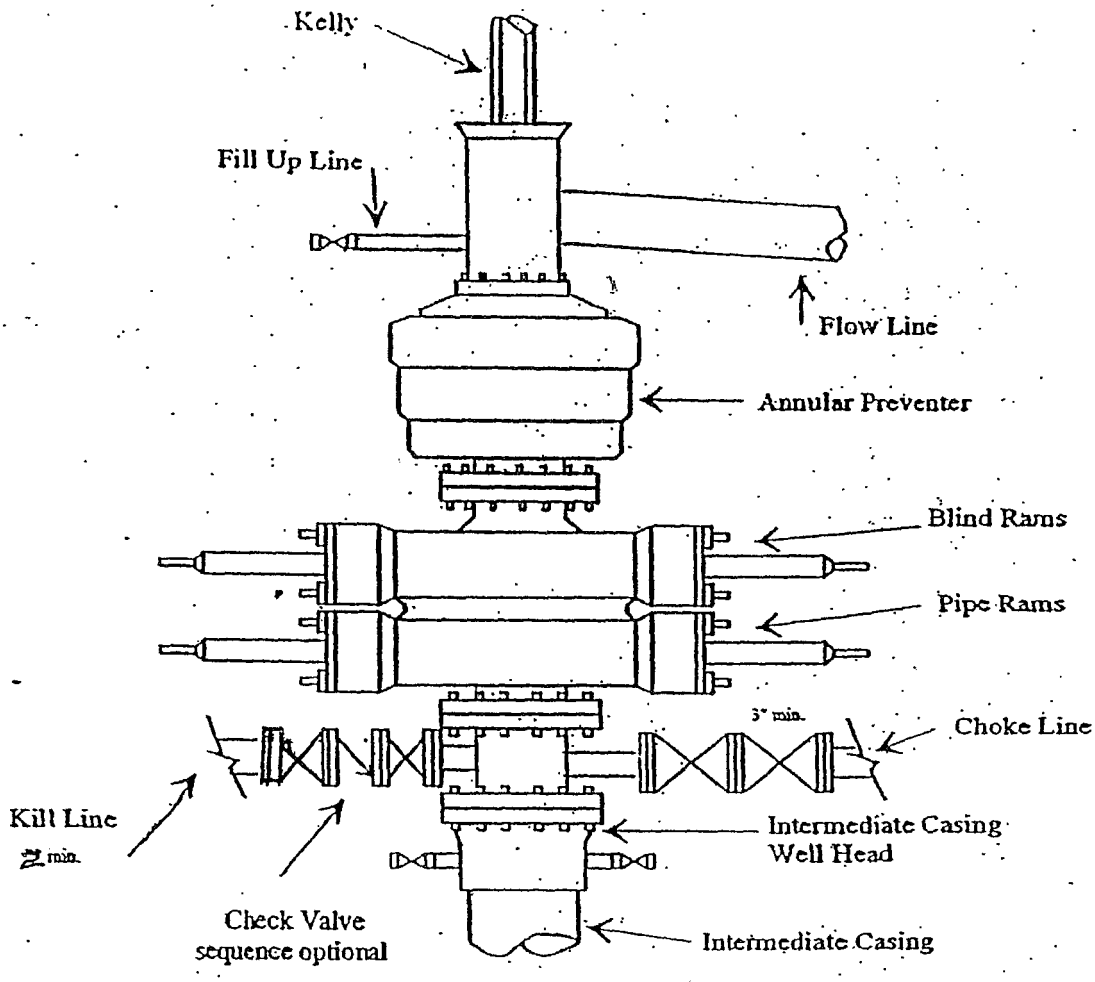
x Phil Maytubby

Yates Petroleum Corporation

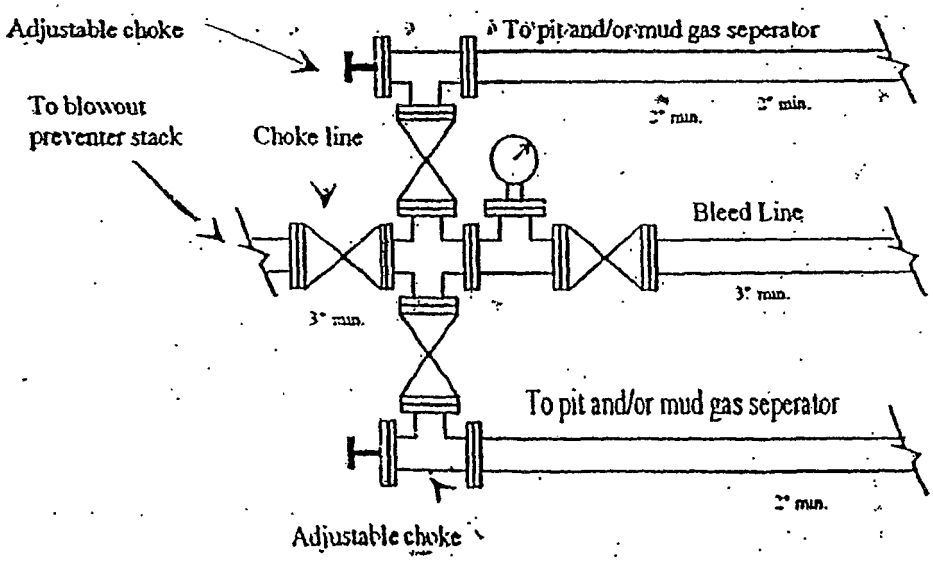
BOP-3

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

Exhibit

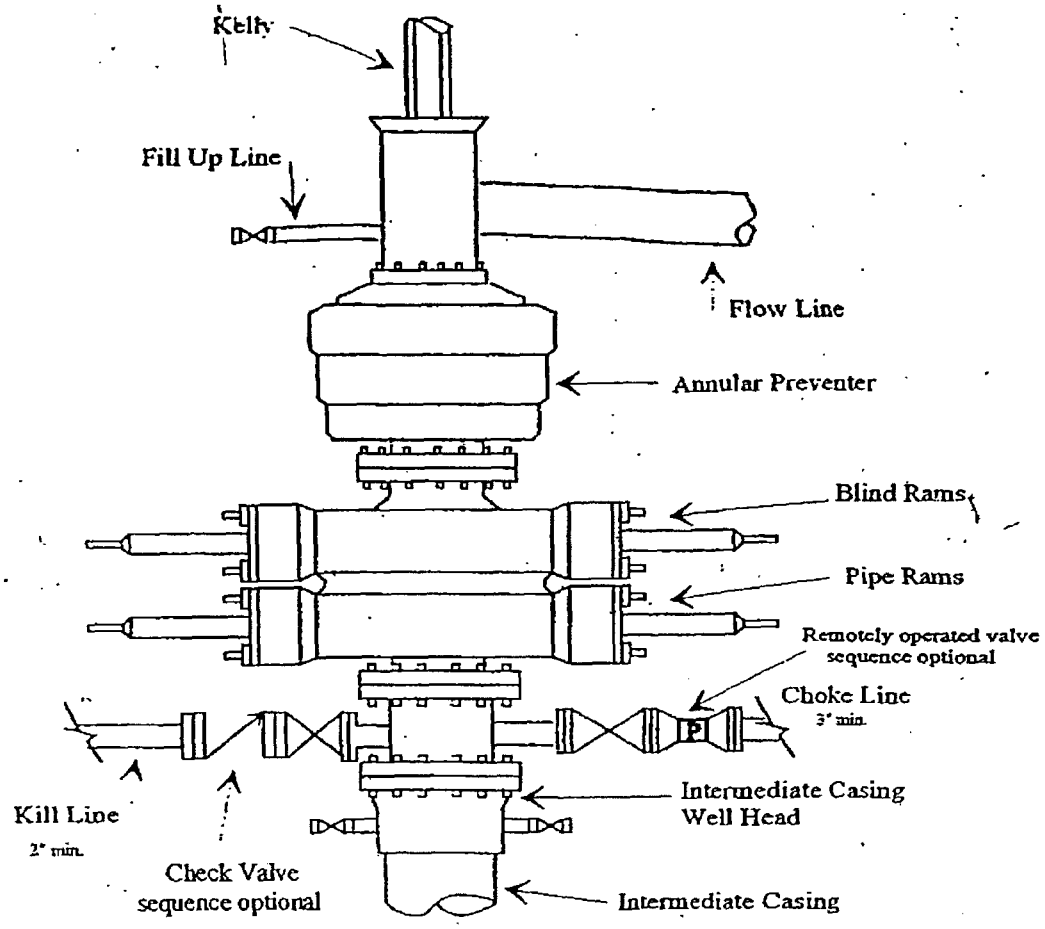


Typical 3,000 psi choke manifold assembly with at least these minimun features

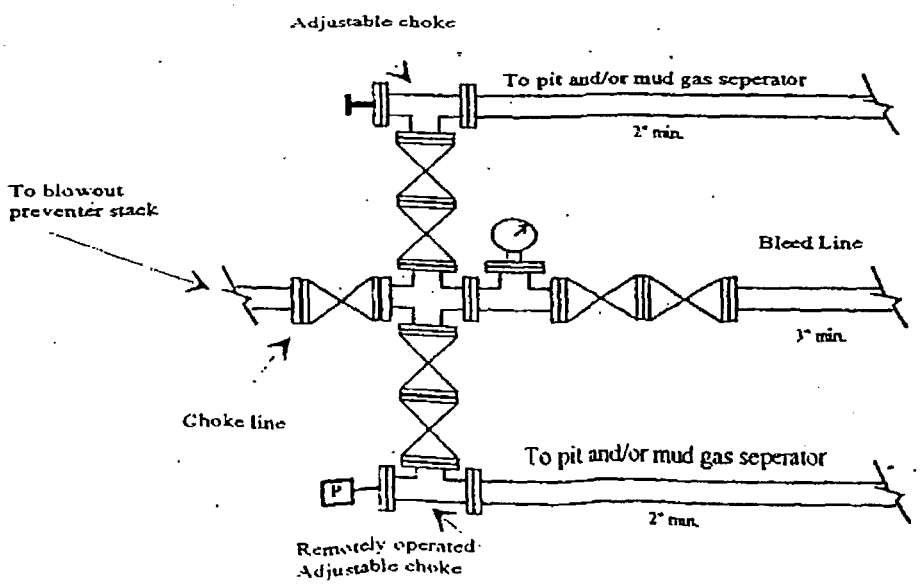


Yates Petroleum Corporation

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

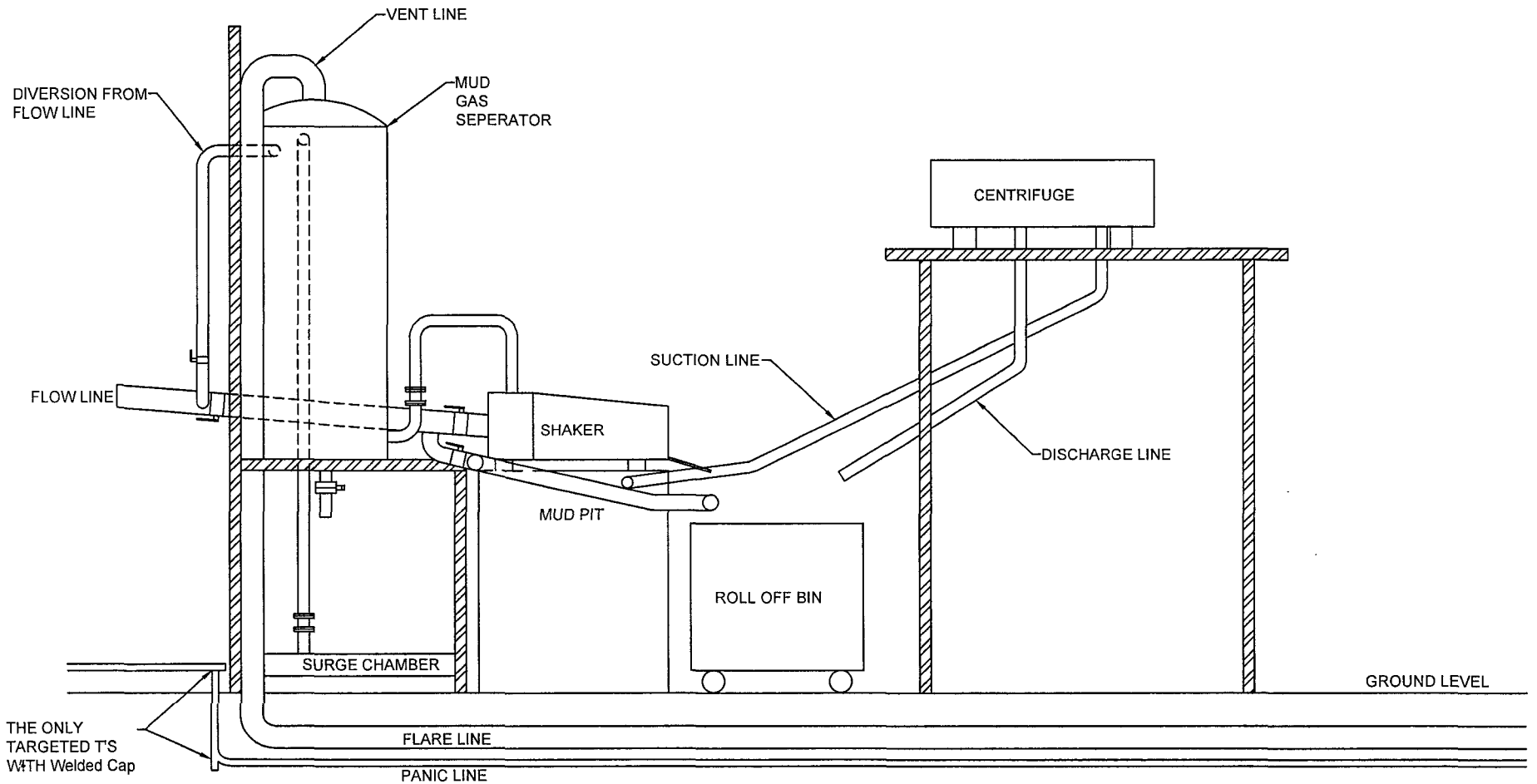


Typical 5,000 psi choke manifold assembly with at least these minimun features



YATES PETROLEUM CORPORATION

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.

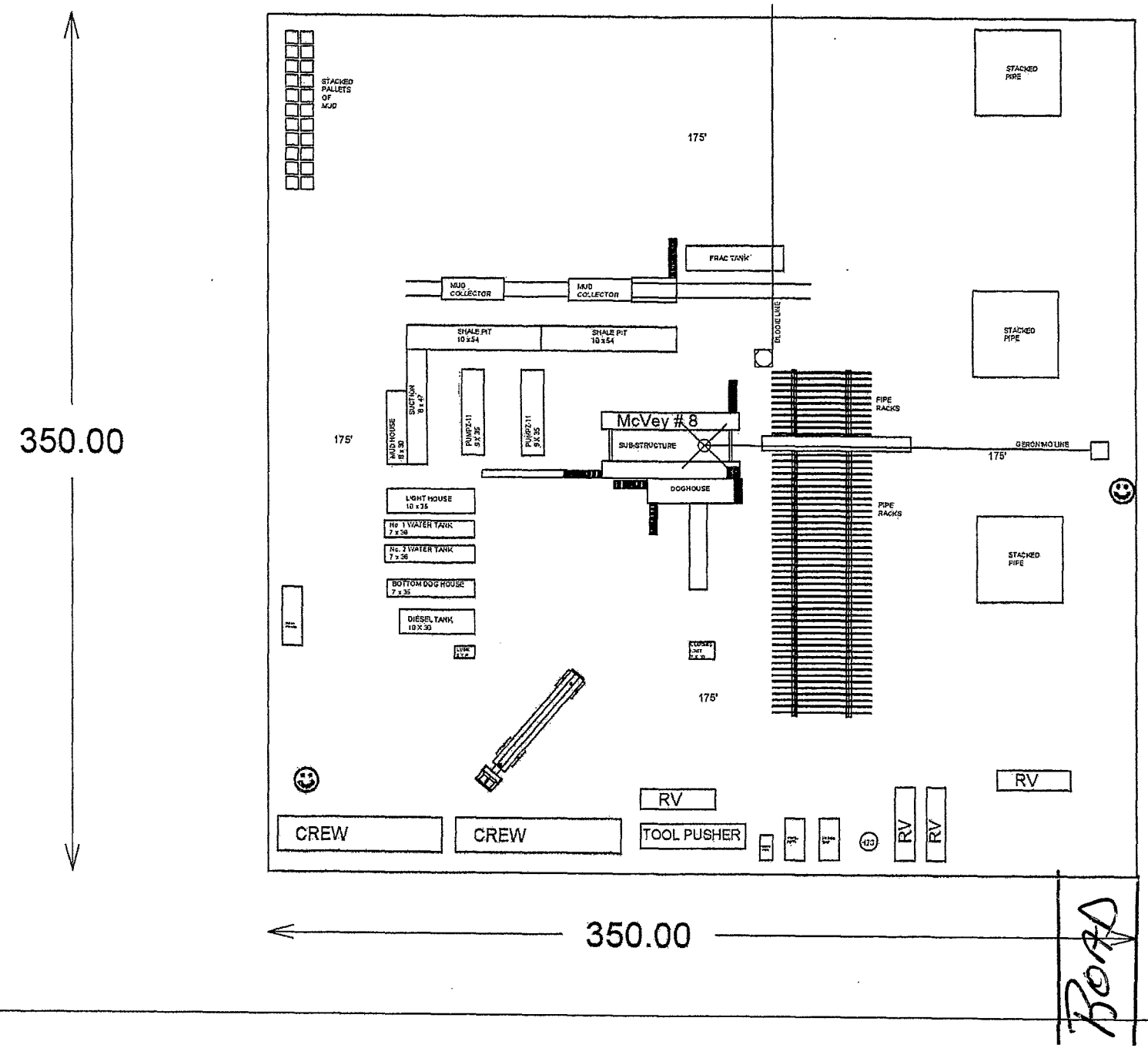
Closure Plan

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 Rig Plat #1

McVay # 8

12-16-13

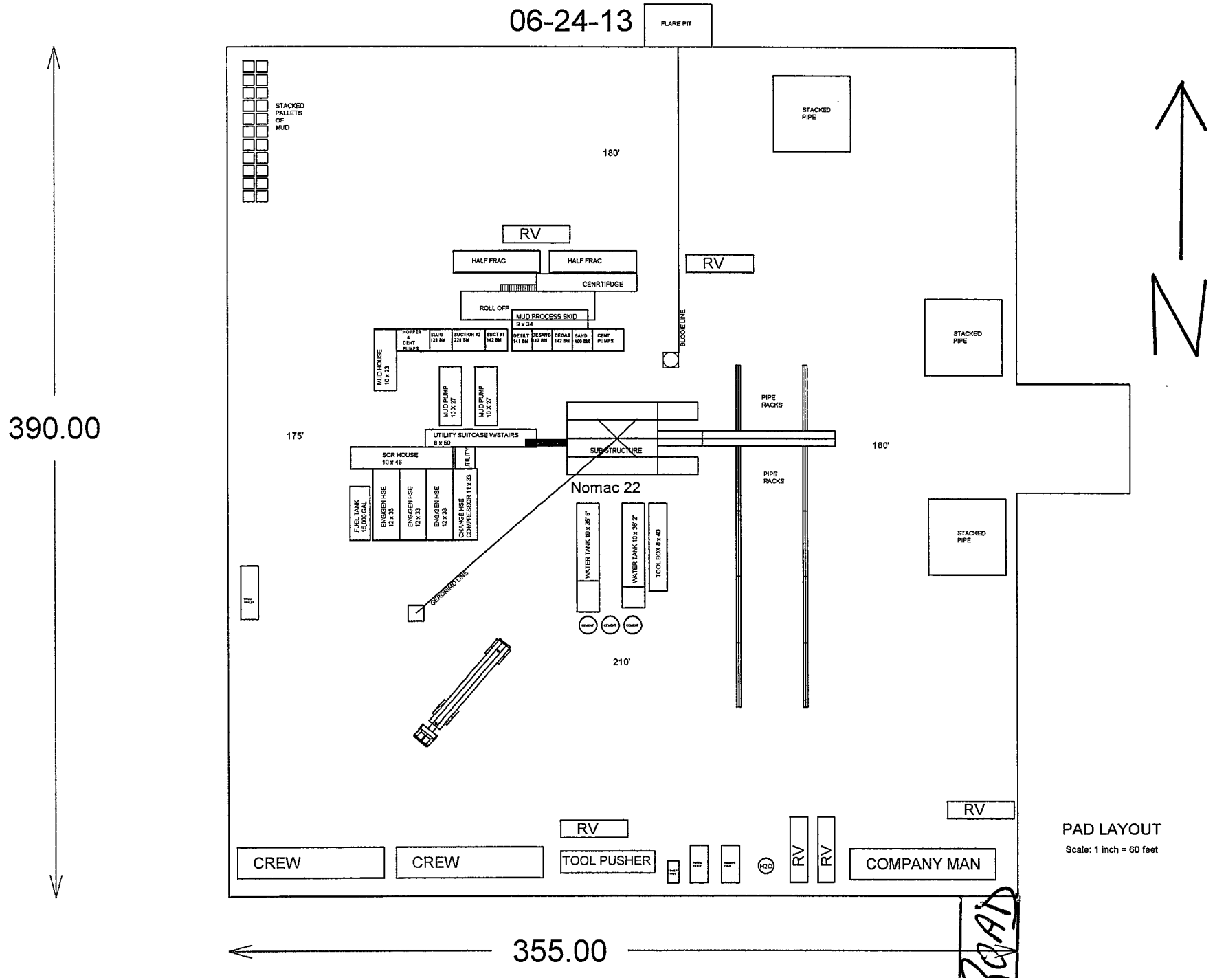


YATES PETROLEUM CORPORATION

Rig Plat #2

Nomac 22

06-24-13



PAD LAYOUT

Scale: 1 inch = 60 feet

Yates Petroleum Corporation

105 S. Fourth Street
Artesia, NM 88210

Hydrogen Sulfide (H_2S) Contingency Plan

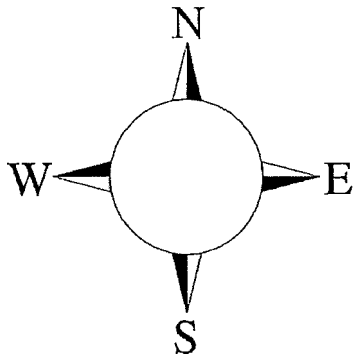
For

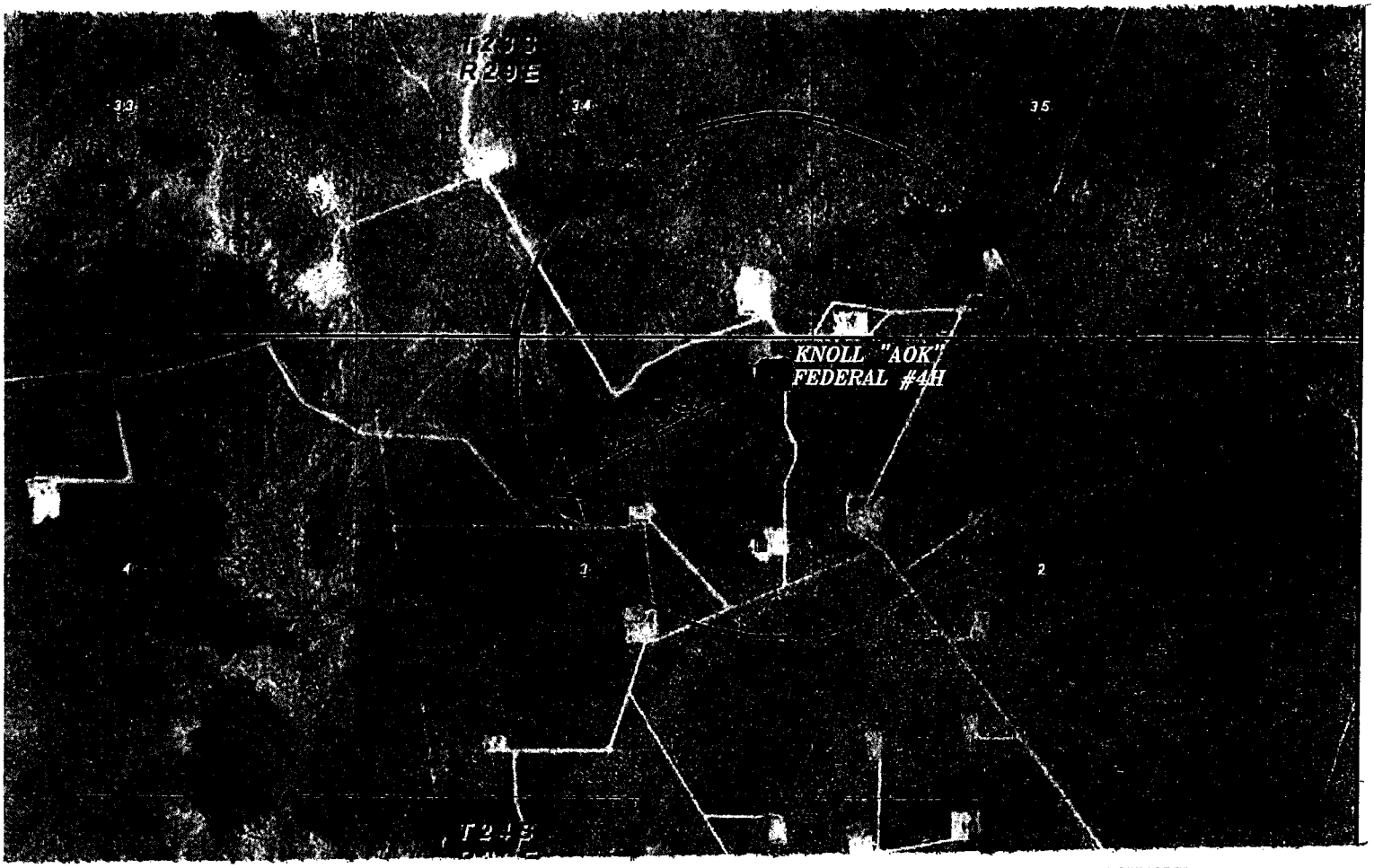
Knoll AOK Federal #4H

430' FNL and 480' FEL
Section 3, T-24-S, R-29-E
Eddy County, NM

Knoll AOK Federal #4H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.

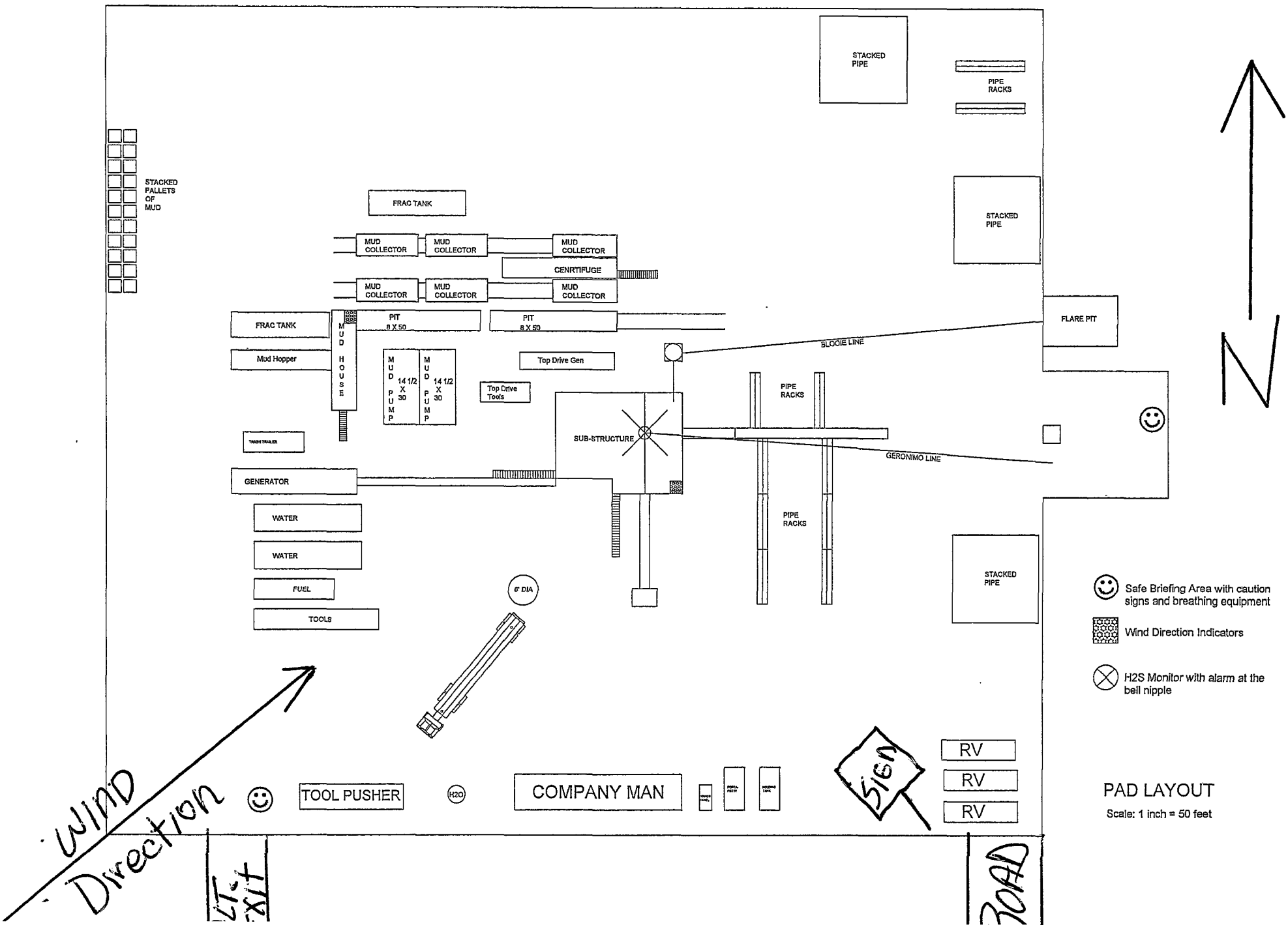




Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

YATES PETROLEUM CORPORATION



Emergency Procedures

In the case of a release of gas containing H_2S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H_2S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H_2S monitors and air packs in order to control the release. Use the "buddy system' to ensure no injuries during the response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentr-ation
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

YPC personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. YPC Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Yates Petroleum Corporation Phone Numbers

YPC Office ..... (575) 748-1471
Jim Brown/Operations Manager ..... (575) 748-4189
LeeRoy Richards/Prod Superintendent ..... (575) 748-4228
Joe Chaves/Assistant Prod Superintendent (575) 748-4212
Bruce Noles/Drilling ..... (575) 748-4224
Paul Hanes/Prod. Foreman/Roswell ..... (575) 624-2805
Tim Bussell/Drilling Superintendent ..... (575) 748-4221
Artesia Answering Service ..... (575) 748-4302
(During non-office hours)

Agency Call List

Eddy County (575)

Artesia

State Police 746-2703
City Police 746-2703
Sheriff's Office 746-9888
Ambulance 911
Fire Department 746-2701
LEPC (Local Emergency Planning Committee) 746-2122
NMOCD 748-1283

Carlsbad

State Police 885-3137
City Police 885-2111
Sheriff's Office 887-7551
Ambulance 911
Fire Department 885-2111
LEPC (Local Emergency Planning Committee) 887-3798
US Bureau of Land Management 887-6544
New Mexico Emergency Response Commission (Santa Fe) (505)476-9600
24 HR ..... (505) 827-9126
New Mexico State Emergency Operations Center ..... (505) 476-9635
National Emergency Response Center (Washington, DC) ...(800) 424-8802

Other

Boots & Coots IWC ..... 1-800-256-9688 or (281) 931-8884
Cudd Pressure Control ..... (915) 699-0139 or (915) 563-3356
Halliburton ..... (575) 746-2757
B. J. Services ..... (575) 746-3569

Flight For Life -4000 24th St, Lubbock, TX ..... (806) 743-9911
Aerocare -Rr 3 Box 49f, Lubbock, TX ..... (806) 747-8923
Med Flight Air Amb 2301 Yale Blvd SE #D3, Albuq, NM ..... (505) 842-4433
S B Air Med Svc 2505 Clark Carr Loop SE, Albuq, NM ..... (505) 842-4949

Yates Petroleum Corporation

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

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

1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel well be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and H2S Contingency Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operation Plan and the H2S Contingency Plan. **The location of this well does not require a Public Protection Plan.**

II. H2S SAFETY EQUIPMENT AND SYSTEMS

NOTE: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S.

1. Well Control Equipment:

A. Flare line

B. Choke manifold will have a remotely operated adjustable choke system.

C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. Protective equipment for essential personnel:

A. Mark II Survive Air (or equivalent) 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. H2S detection and monitoring equipment:

A. 3 portable H2S monitors positioned at: Shale Shaker, Bell Nipple, and Rig Floor. These units have warning lights and audible sirens when H2S levels of 10 PPM are reached.

4. Visual warning systems:

A. Wind direction indicators as shown on well site diagram (attached).

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

5. Mud program:

A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

6. Metallurgy:

A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

B. All elastomers used for packing and seals shall be H2S trim.

7. **Communication:**

A. Cellular communications in company vehicles.

B. Land line (telephone) communication at the Office.

8. **Well testing:**

A. There will be no drill stem testing.

EXHIBIT

DANGER

POISONS GAS

HYDROGEN SULFIDE

NORMAL OPERATIONS

(GREEN)

CAUTION POTENTIAL DANGER

(YELLOW)

DANGER POISONS GAS ENCOUNTERED

(RED) AUTHORIZED PERSONAL ONLY.

LOCATION SECURED.

1-575-746-1096

1-877-879-8899

EDDY COUNTY EMERGENCY NUMBERS

ARTESIA FIRE DEPT. 575-746-5050

ARTESIA POLICE DEPT. 575-746-5000

EDDY CO. SHERIFF DEPT. 575-746-9888

LEA COUNTY EMERGENCY NUMBERS

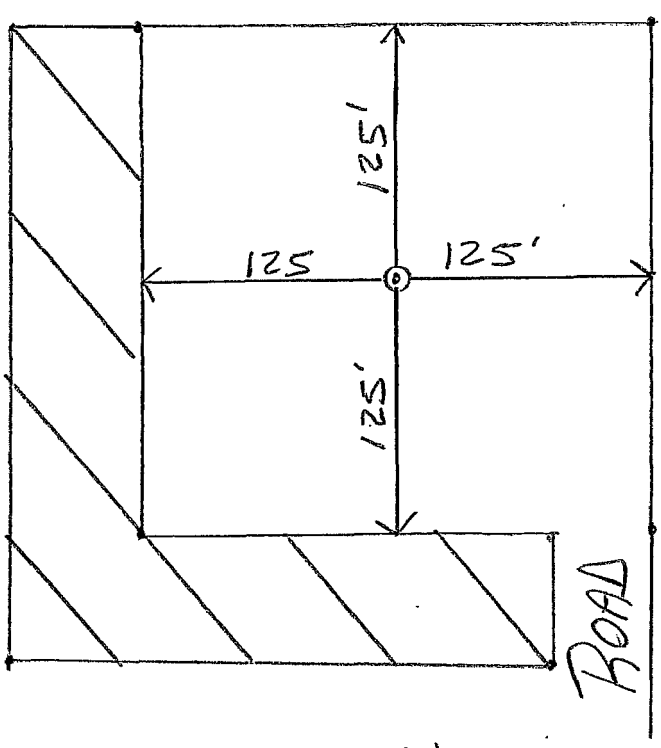
HOBBS FIRE DEPT. 575-397-9308

HOBBS POLICE DEPT. 575-397-9285

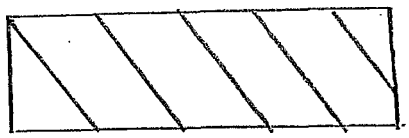
LEA CO. SHERIFF DEPT. 575-396-1196

RECLAMATION PLAT

KNOLL OAK FEDERAL #4H



THERE will NOT Be Production FACILITIES on THIS LOCATION



RECLAIMED AREA

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
Yates Petroleum Corporation
Knoll AOK Federal #4H
430' FNL & 480' FEL Surface Hole Location
660' FSL and 330' FWL Bottom Hole Location
Section 3, T24S-R29E
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 6 miles east of Malaga, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go east of Malaga, New Mexico on Duarte Road (CR-720) for .7 of a mile to Harroun Road (CR-745). Turn left on Harroun Road and go approx. 2.9 miles to Dog Town Road (CR-788). Turn right on Dog Town Road and go approx. 1.1 miles. Turn left here on caliche road and go 1.9 miles. Turn left here at a cattleguard and go past dry hole location with tanks on it to one more cattleguard. From the cattleguard go north on lease road for approximately .4 of a mile to the River Bend Federal #1 well. Follow the lease road to the left and go up the hill for approx. .6 of a mile to the HB 3 Federal #2 Battery. Follow the lease road for approximately .8 of a mile. Turn left here on existing lease road that goes to the Knoll AOK Federal #2 well location and go approximately .5 of a mile to the southeast corner of the proposed well location.

2. PLANNED ACCESS ROAD.

A. Existing road access disturbance will be used to get to this well. The existing road goes the the Knoll AOK Federal. #2 goes to the southeast 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 shows existing wells within a one-mile radius of the proposed well site.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. There are production facilities on this lease at the present time.
B. One (1) 2 7/8" J-55 steel surface flowline with a working pressure of 100# psi and a volume of 500 barrels per day. The Length of the flowline will be approximately 4500' and will follow existing road disturbance from the Knoll AOK Federal #4H to the Knoll AOK Federal #1 tank battery site. Please note attached plat showing the proposed route.

5. LOCATION AND TYPE OF WATER SUPPLY:

   A. It is planned to drill the proposed well with a brine water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in the exhibit.

6. SOURCE OF CONSTRUCTION MATERIALS:

   The dirt contractor will be responsible for finding a source of material for construction of road and pad and will obtain any permits that may be required.

7. METHODS OF HANDLING WASTE DISPOSAL:

   A. This well will be drilled with a closed loop system
   B. 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. Drilling fluids will be removed after drilling and completions are completed.
   D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
   E. Oil produced during operations will be stored in tanks until sold.
   F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
   G. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

8. ANCILLARY FACILITIES: NONE

9. WELLSITE LAYOUT:

   A. Yates has staked a 420' x 420' "Pad Clearance Area." This area can contain the regularly used rigs Yates utilizes in Southeastern New Mexico. The actual pad size to be constructed would be smaller than the "Pad Clearance Area." This area was staked at this size with aid from the BLM, since the actual pad size/drilling rig is unknown at this time. Yates will submit a Sundry Notice with a rig layout depicting the actual size of the pad to be constructed with the dimensions from the well bore to all four sides of the pad with the same orientation as the "Pad Clearance Area." Yates will not construct the well pad until the rig layout is approved through the Sundry Notice.

   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 for the Knoll AOK Federal #4H 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. The location will be re-contoured as close to the original lands as possible before construction was begun. Please note attached Reclamation Plat.

C. These actions will be completed and accomplished as expeditiously as possible.

D. 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-85891
Bureau of Land Management
620 East Greene Street, Carlsbad, NM 88220

12. OTHER INFORMATION:

A. The primary use of the surface is for grazing.

B. Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, and historical and cultural sites.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
New Mexico State Office
P.O. Box 27115
Santa Fe, New Mexico 87502-0115
www.blm.gov/nm

TAKE PRIDE IN AMERICA

IN REPLY REFER TO
3106 (921-js)

December 1, 2016

Notice

EOG Y Resources, Inc.
Attn: Kathy H. Porter
105 S. 4th Street
Artesia, NM 88210

U.S. Specialty Insurance Company
13403 Northwest Freeway
Houston, TX 77040-6094

Name Change Recognized
Yates Petroleum Corporation to EOG Y Resources, Inc.
Bond Rider Accepted

We received acceptable evidence of the name change from Yates Petroleum Corporation to EOG Y Resources, Inc. effective November 1, 2016.

The oil and gas leases identified on the enclosed exhibit have been noted as to the name change. These lease numbers were obtained from our Legacy Rehost System (LR2000). If you identify additional leases, please contact this office and we will note our records accordingly. We have not abstracted the lease files to determine if the entity affected by the name change holds an interest in the leases nor have we attempted to identify leases where the entity is the operator on the ground.

We are notifying the Office of Natural Resources Revenue (ONRR) and all Bureau of Land Management offices of the name change by copies of this notice. If additional documentation for changes of operator is required by our Field Offices, they will contact you.

There are Four BLM bonds affected by this name change:

Yates Petroleum Corporation is a principal on the following bonds held by the BLM Wyoming State Office:

- BLM Statewide Bond Number: WYB000404
  Surety Number: B002818
  Amount: $4,594,173
  Surety: U.S. Specialty Insurance Company

- BLM Individual Bond Number : WYB001919
  Surety Number : B009716
  Amout: $10.000
  Surety: U.S. Specialty Insurance Company

For requirements concerning this bond, please contact Angela Montgomery in the Wyoming State Office at 307-775-6299.

Yates Petroleum Corporation is the principal on the following bond held by the BLM New Mexico State Office:

- BLM Statewide Bond Number: NMB000920
  Surety Number: B007414
  Amount: $150.000
  Surety: U.S. Specialty Insurance Company

For requirements concerning this bond, please contact JulieAnn Serrano in the New Mexico State Office at 505-954-2149.

On November 14, 2016, we received Bond Rider No. 2, for BLM Nationwide Bond No. NMB000434 changing the name from Yates Petroleum Corporation to EOG Y Recourses, Inc. The rider has been examined and found satisfactory and is accepted effective November 16, 2016, the date filed in this office.

If you have any questions, please contact Julie Ann Serrano at (505) 954-2149.

Gloria D Baca

Gloria Baca
Supervisory Land Law Examiner
Branch of Adjudication

Enclosure
List of Leases

cc:
Electronic Copies (w encl):
BLM_Bond_Surety
BLM_Fluids_Forum
BLM Wyoming State Office

ONRR
Roswell FO
Carlsbad FO
IAC Name Change Log
Name Change Log Book

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Yates Petroleum Corporation**
LEASE NO.:	**NMNM-85891**
WELL NAME & NO.:	**Knoll AOK Federal 4H**
SURFACE HOLE FOOTAGE:	**0430' FNL & 0480' FEL**
BOTTOM HOLE FOOTAGE	**0660' FNL & 0330' FWL**
LOCATION:	**Section 03, T. 24 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)

Cave and Karst

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

Cave/Karst Surface Mitigation

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

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

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

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

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

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

Leak Detection System:

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

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

Cave/Karst Subsurface Mitigation

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

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

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

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

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

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

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

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

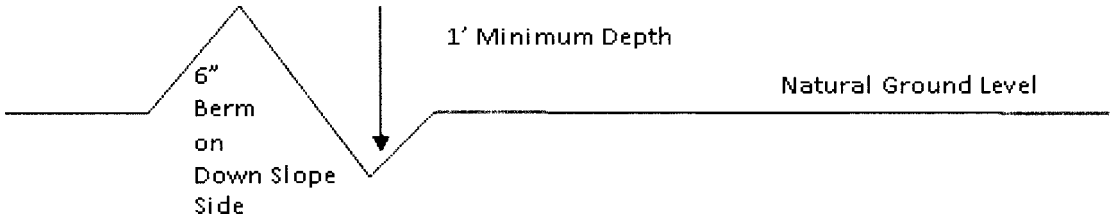
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattleguards

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

Fence Requirement

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

Public Access

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

Construction Steps

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

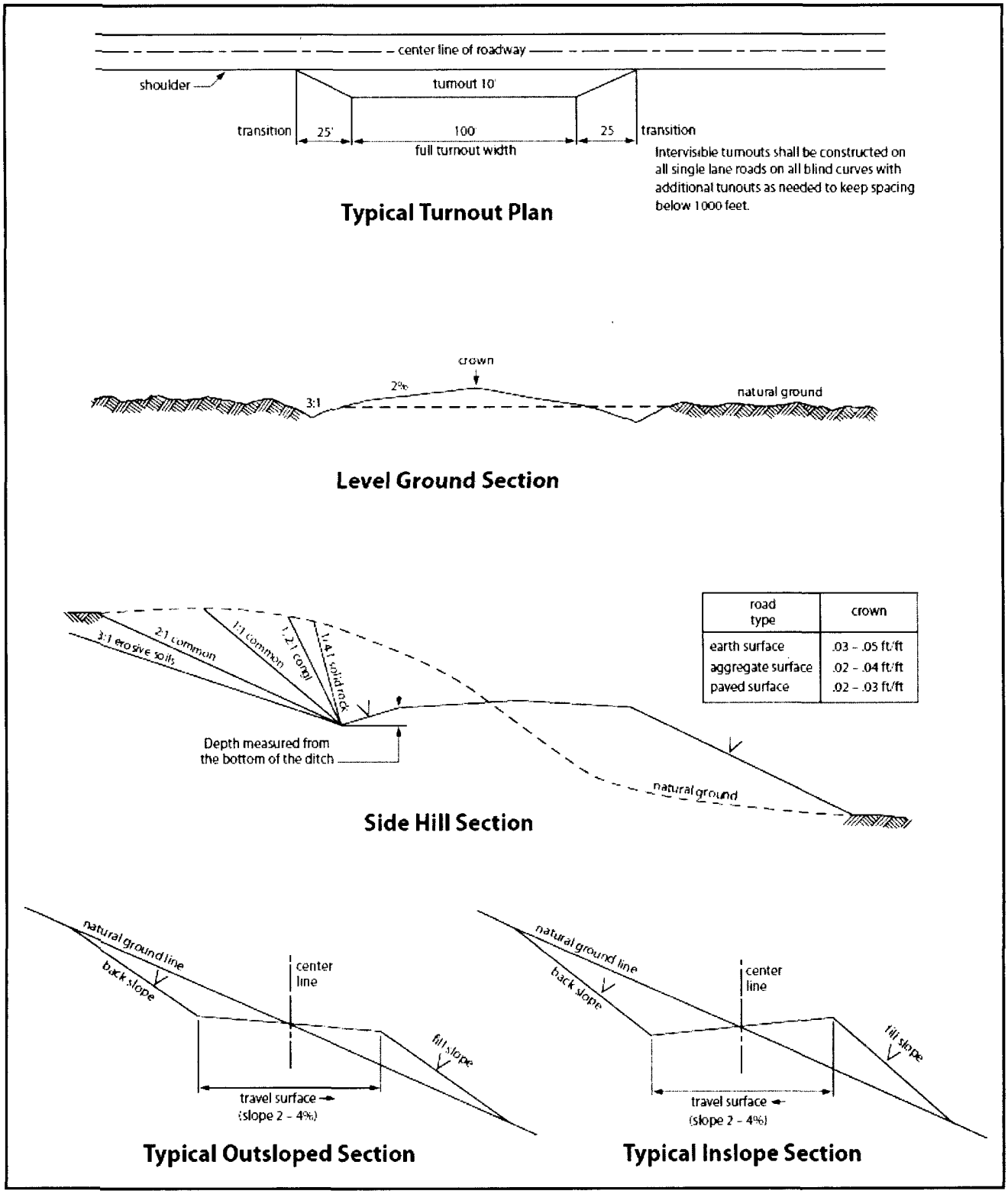


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

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

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

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

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

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size 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.

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.

R-111-P Potash
Medium Cave/Karst
Possibility of water flows in the Castilo and Salado.
Possibility of lost circulation in the Rustler, Red Beds, and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **400** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

    ☒ 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.**

Formation below the 9-5/8" 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:

Option #1:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Option #2:

DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

a. First stage to DV tool:

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

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

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.

5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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** 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 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.

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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Exclosure Netting (Open-top Tanks)

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

Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install

effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

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

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

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

B. PIPELINES
STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.
Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:
1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

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

agency or State government.

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

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

a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;
b. Activities of other parties including, but not limited to:
    (1) Land clearing
    (2) Earth-disturbing and earth-moving work
    (3) Blasting
    (4) Vandalism and sabotage;
c. Acts of God.

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

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

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

6. All construction and maintenance activity shall be confined to the authorized

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

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

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

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

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

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

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

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

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the

holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

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

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

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

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 3, for Shallow Sites

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

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

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

Species	lb/acre
Plains Bristlegrass (*Setaria macrostachya*)	1.0
Green Sprangletop (*Leptochloa dubia*)	2.0
Sideoats Grama (*Bouteloua curtipendula)*	5.0

*Pounds of pure live seed:

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