

OCD-ARTESIA R-111-POTASH

Form 3160-3
(February 2005)

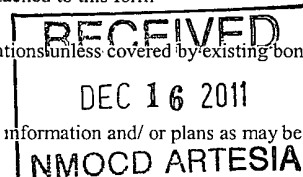
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-106692-65417
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Yates Petroleum Corporation 025575		7. If Unit or CA Agreement, Name and No. N/A
3a. Address 105 South Fourth Street, Artesia, NM 88210	3b. Phone No. (include area code) 575-748-1471	8. Lease Name and Well No. Martha AIK Federal #7H [12538]
4. Location of well (Report location clearly and in accordance with any State requirements. *) At surface 1750' FNL & 200' FEL, Surface Hole At proposed prod. zone 1750' FNL & 330' FWL, Bottom Hole		9. API Well No. 30-015-40051
14. Distance in miles and direction from the nearest town or post office* 25 miles East of Loving, NM		10. Field and Pool, or Exploratory Livingston Ridge [38360]
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 200'		11. Sec., T., R., M., or Blk. And Survey or Area Sec. 11-T22S-R31E
16. No. of acres in lease 560.00	17. Spacing Unit dedicated to this well N2NE, NENW	12. County or Parish Eddy
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 200'	19. Proposed Depth 7060 per operator 9/19/11 8280VD & 11506' MD	13. State NM
20. BLM/ BIA Bond No. on file NATIONWIDE BOND #NMB000434	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3550' GL	22. Aproximate date work will start* ASAP
23. Estimated duration 45 Days		24. Attachments

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

- | | |
|--|--|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by existing bond on file (see item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/ or plans as may be required by the BLM |



25. Signature <i>Travis Hahn</i>	Printed Name Travis Hahn	Date 8/1/2011
Title Land Regulatory Agent		

Approved By (Signature) <i>Timothy M. Murphy</i>	Name (Printed/ Typed) Timothy M. Murphy	Date DEC 13 2011
Title ACTING STATE DIRECTOR	Office NM STATE 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 cc 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 wilfully 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.

*(Instructions on page 2)

**CARLSBAD CONTROLLED WATER BASIN
SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED**

CERTIFICATION
YATES PETROLEUM CORPORATION
Martha AIK Federal #7H

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; and an someone under employment of Yates Petroleum Corporation has full knowledge of state and federal laws applicable to 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 14 day of _____ 2011

Signature 

Name Travis Hahn

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

DISTRICT II

1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised July 16, 2010

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-40051	Pool Code 39360	Pool Name Livingston Ridge ; Delaware
Property Code 12538	Property Name MARTHA "AIK" FEDERAL	Well Number 7H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3550'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	11	22 S	31 E		1750	NORTH	200	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	11	22 S	31 E		1750	NORTH	330	WEST	EDDY
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.						

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

	<p>OPERATOR CERTIFICATION</p> <p>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.</p> <p>Signature: <i>Travis Hahn</i> Date: 8/26/11</p> <p>Printed Name: Travis Hahn</p> <p>Email Address: thahn@yatespetroleum.com</p>
<p>PROPOSED BOTTOM HOLE LOCATION</p> <p>Lat - N 32°24'30.55" Long - W 103°45'22.04" NMSPCE- N 512818.937 E 719469.722 (NAD-83)</p>	<p>SURVEYOR CERTIFICATION</p> <p>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 supervision, and that the same is true and correct to the best of my belief.</p> <p>Date Surveyed: JAN 18 2012</p> <p>Signature & Seal of Professional Surveyor: <i>[Signature]</i></p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS 23906</p>

YATES PETROLEUM CORPORATION

Martha AIK Federal #7H
1750' FNL & 200' FEL, Surface Hole
1750' FNL & 330' FWL, Bottom Hole
Section 11 -T22S-R31E
Eddy County, New Mexico

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

Rustler	680'	Cherry Canyon	5340' Oil
Top of Salt	990'	Livingston Ridge	7112' Oil MD
Base of Salt	4140'	Livingston Ridge Target	7333' Oil MD
Bell Canyon	4514'	TD	11604' Oil MD

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

Water: Approx. 0' - 650'
Oil or Gas: Oil Zones: 5340', 7112', 7333'

3. Pressure Control Equipment: 3000 PSI BOPE with a 13.625" 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 Exhibit B.

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.

1. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: (All New)

	<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
<i>See COA</i>	17 1/2"	13 3/8"	48#	J-55/H-40	ST&C	0-710' 750	710'
	12 1/4"	9 5/8"	40#	J-55	LT&C	0-100'	100'
	12 1/4"	9 5/8"	36#	K-55	LT&C	100-3300'	3200'
	12 1/4"	9 5/8"	40#	J-55	LT&C	3300-4350'	1050'
	8 3/4"	5 1/2"	17#	HCP-110	LT&C	0-6500'	6500'
	8 1/2"	5 1/2"	17#	L-80	LT&C	6500'-11604'	5104'

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

B. CEMENTING PROGRAM:

Surface Casing: 350 sacks Class C Lite + 2% CaCl₂ (YLD 2.00 WT.12.50). Tail in with 210 sacks Class C + 2% CaCl₂ (WT 14.80, YLD 1.34). Designed with 100% excess. TOC-Surface.

Intermediate Casing: Lead with 1225 sacks Class C Lite + 2% CaCl₂ (YLD 2.00 WT 12.50); tail in with 210 sacks Class C + 2% CaCl₂ (YLD 1.34 WT. 14.80). Designed with 100% excess. TOC-Surface

Production Casing: Cement to be done in three stages, DV tools @ 6500' & 4000'

Stage 1 from 6500'-11604'; Lead with 1300 sacks of Pecos Valley Lite (YLD 1.83 WT. 13.00). 30%CaCO₃, 3.2% Expansion additive, 2% Antifoam, .8% Retarder, 15 Fluid loss. Designed with 100% excess. TOC-6500'

Stage 2 from 4000'-6500'; Lead with 560 sacks of Class C Lite (YLD 2.00 WT 12.50) CaCl₂ +2%. Tail with 100 sacks of Pecos Valley Lite (WT 13.00, YLD 1.41), 30%CaCO₃, 3.2% Expansion additive, 2% Antifoam, .8% Retarder, 15 Fluid loss. Designed with 100% excess.

Stage 3 from 0'-4000'; Lead with 935 sacks of Class C Lite (WT 12.50, YLD 2.0) CaCl₂ +2%. Tail with 100 sacks of Pecos Valley Lite (WT 13.00, YLD 1.41), 30%CaCO₃, 3.2% Expansion additive, 2% Antifoam, .8% Retarder, 15 Fluid loss. Designed with 100% excess.

Well will be drilled vertically depth to 6583'. Well will be kicked off at approximately 6583' and directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 7400' MD (7060' TVD). Hole will then be reduced to 8 1/2" and drilled to 11604' MD (7060' TVD); where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 1750' FNL & 677' FEL, Section 11-22S-31E. Deepest TVD is 7060' in the lateral. NO PILOT HOLE.

5. Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0-710' 750'	Fresh Water Gel	8.6-9.2	32-34	N/C
710'-4350'	Brine Water	10.0-10.10	28-28	N/C
4350'-6583'	Cut Brine	8.7-9.1	28-28	<10-15
6583'-111604'	Cut Brine (Lateral Section)	8.7-9.1	28-28	<10-12

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. Mud will be checked hourly by rig personnel.

6. EVALUATION PROGRAM:

See COA

Samples: 10' Samples from Intermediate casing.

Logging: Platform Express through curve.

CNL/LDT/NGT – through curve to Intermediate casing

CNL/GR – through curve to surface

DLL-MSFL – through curve to surface casing

GHC.Sonic-CMR – through curve to surface casing

MWD-GR – Horizontal

Coring: TBD.
DST's: TBD.
Mudlogger: TBD.

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

Anticipated BHP:

From: 0	TO: 710'	Anticipated Max. BHP:	340	PSI
From: 700'	TO: 4350'	Anticipated Max. BHP:	2285	PSI
From: 4350	TO: 7060'	Anticipated Max. BHP:	3340	PSI

No abnormal pressures or temperatures are anticipated.

Possible water flow below 2800'

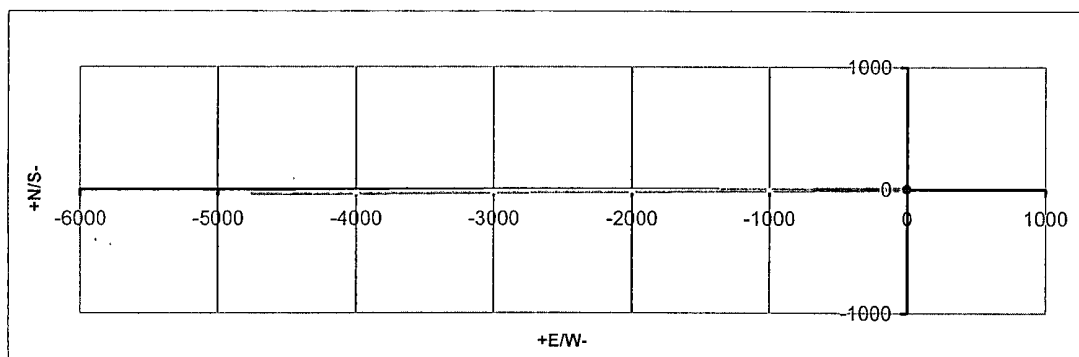
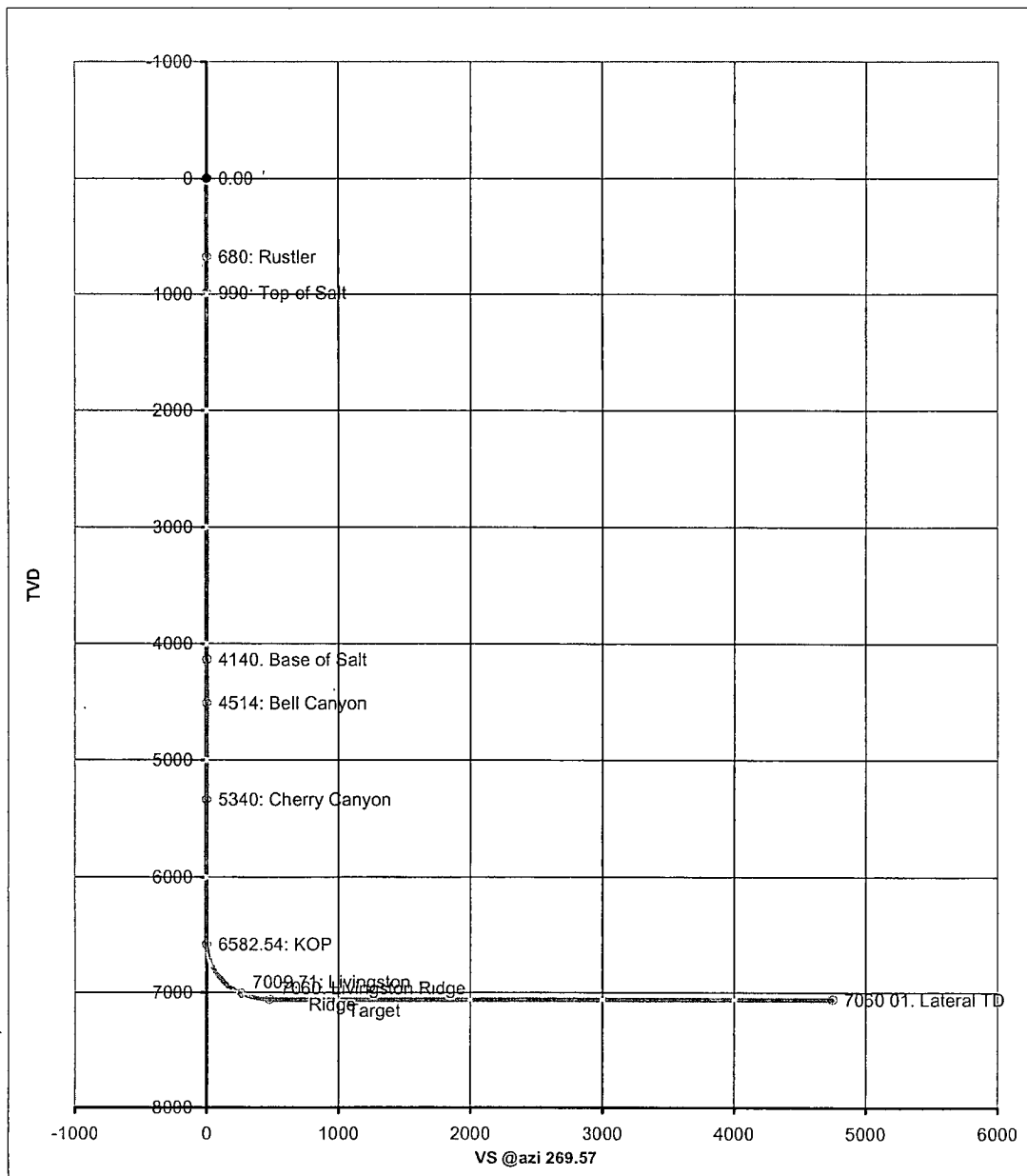
H2S may be encountered on this well.

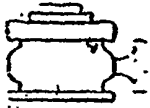
7. ANTICIPATED STARTING DATE:

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.

Co: Yates Petroleum Corporation			Units: Feet, ° 7100ft			VS Az: 269.57		Tgt TVD: 7060.00	
Drillers: 0			Elevation:			Tgt Radius: 0.00		Tgt MD: 0.00	
Well Name: Martha AIK Federal #7H			Northing:			Tgt N/S: -35.50		Tgt Displ.: 0.00	
Location: Sect. 11, 22S-31E			Easting:			Tgt E/W: -4748.60		Method: Minimum Curvature	

No.	MD	CL	Inc.	Azi	TVD	VS	+N/S	+E/W	BR	WR	DLS	Comments
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
1	680.00	680.00	0.00	360.00	680.00	0.00	0.00	0.00	0.00	0.00	0.00	Rustler
2	990.00	310.00	0.00	360.00	990.00	0.00	0.00	0.00	0.00	0.00	0.00	Top of Salt
3	4140.00	3150.00	0.00	360.00	4140.00	0.00	0.00	0.00	0.00	0.00	0.00	Base of Salt
4	4514.00	374.00	0.00	360.00	4514.00	0.00	0.00	0.00	0.00	0.00	0.00	Bell Canyon
5	5340.00	826.00	0.00	360.00	5340.00	0.00	0.00	0.00	0.00	0.00	0.00	Cherry Canyon
6	6582.54	6582.54	0.00	269.57	6582.54	0.00	0.01	0.00	0.00	4.10	0.00	KOP
7	6600.00	17.46	2.10	269.57	6600.00	0.32	0.00	-0.32	12.01	0.00	12.01	
8	6700.00	100.00	14.11	269.57	6698.82	14.39	-0.10	-14.39	12.01	0.00	12.01	
9	6800.00	100.00	26.11	269.57	6792.55	48.71	-0.36	-48.70	12.01	0.00	12.01	
10	6900.00	100.00	38.12	269.57	6877.09	101.77	-0.75	-101.77	12.01	0.00	12.01	
11	7000.00	100.00	50.13	269.57	6948.74	171.27	-1.27	-171.27	12.01	0.00	12.01	
12	7100.00	100.00	62.14	269.57	7004.36	254.15	-1.89	-254.15	12.01	0.00	12.01	
13	7111.71	529.17	63.54	269.57	7009.71	264.57	-1.97	-264.57	12.01	0.00	12.01	Livingston Ridge
14	7200.00	88.29	74.10	269.57	7041.56	346.78	-2.59	-346.77	11.95	0.00	11.95	
15	7300.00	100.00	86.10	269.57	7058.73	445.11	-3.32	-445.10	12.00	0.00	12.00	
16	7332.53	750.00	90.00	269.57	7060.00	477.46	-3.56	-477.45	12.00	0.00	12.00	Livingston Ridge Target
17	11603.80	4271.27	90.00	269.57	7060.01	4748.73	-35.49	-4748.60	0.00	0.00	0.00	Lateral TD





Yates Petroleum Corporation

BOP-3

Typical 3,000 psi Pressure System
Schematic

Annular with Double Ram Preventer Stack

Yates Petroleum Corporation

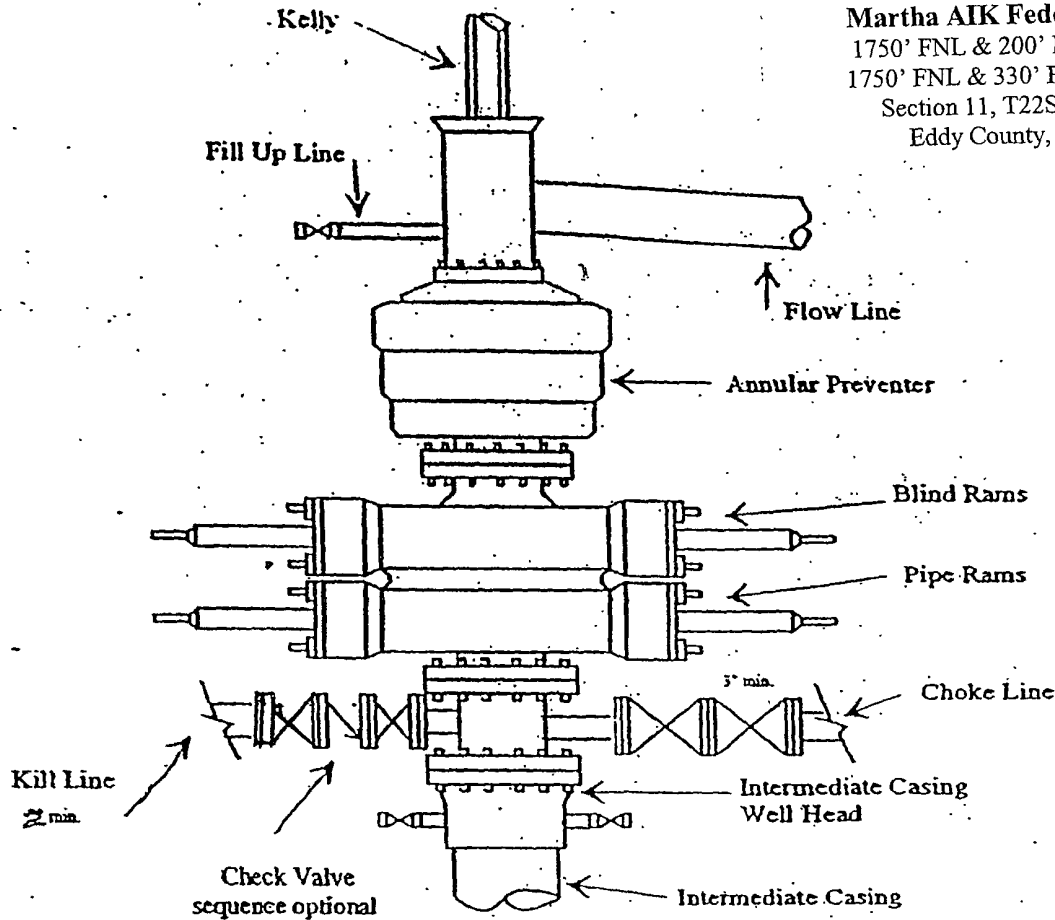
Martha AIK Federal #7H

1750' FNL & 200' FEL SHL

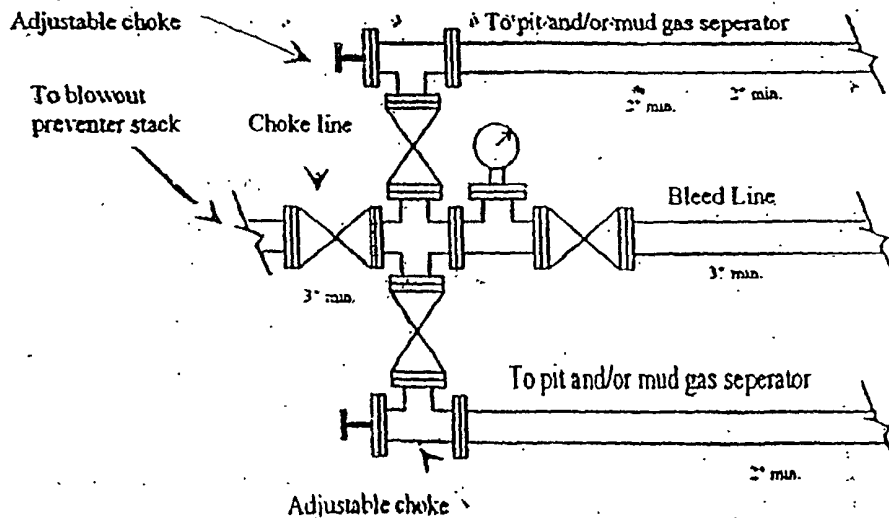
1750' FNL & 330' FWL BHL

Section 11, T22S-R31E

Eddy County, NM



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



YATES PETROLEUM CORPORATION
Piping from Choke Manifold
to the Closed-Loop Drilling Mud System

Yates Petroleum Corporation

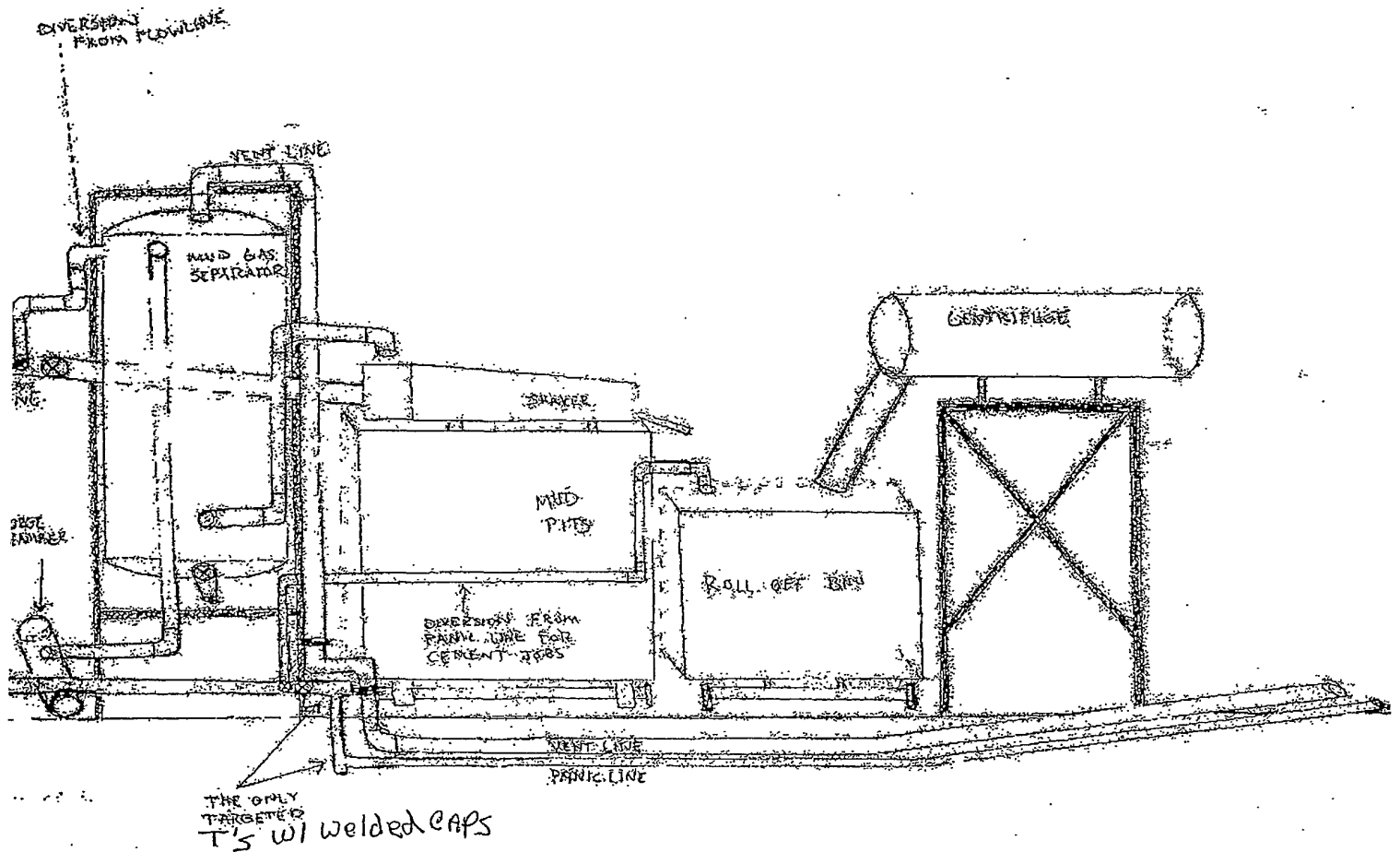
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1750' FNL & 200' FEL SHL

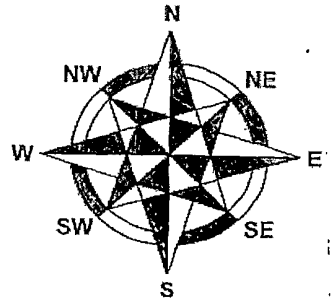
1750' FNL & 330' FWL BHL

Section 11, T22S-R31E

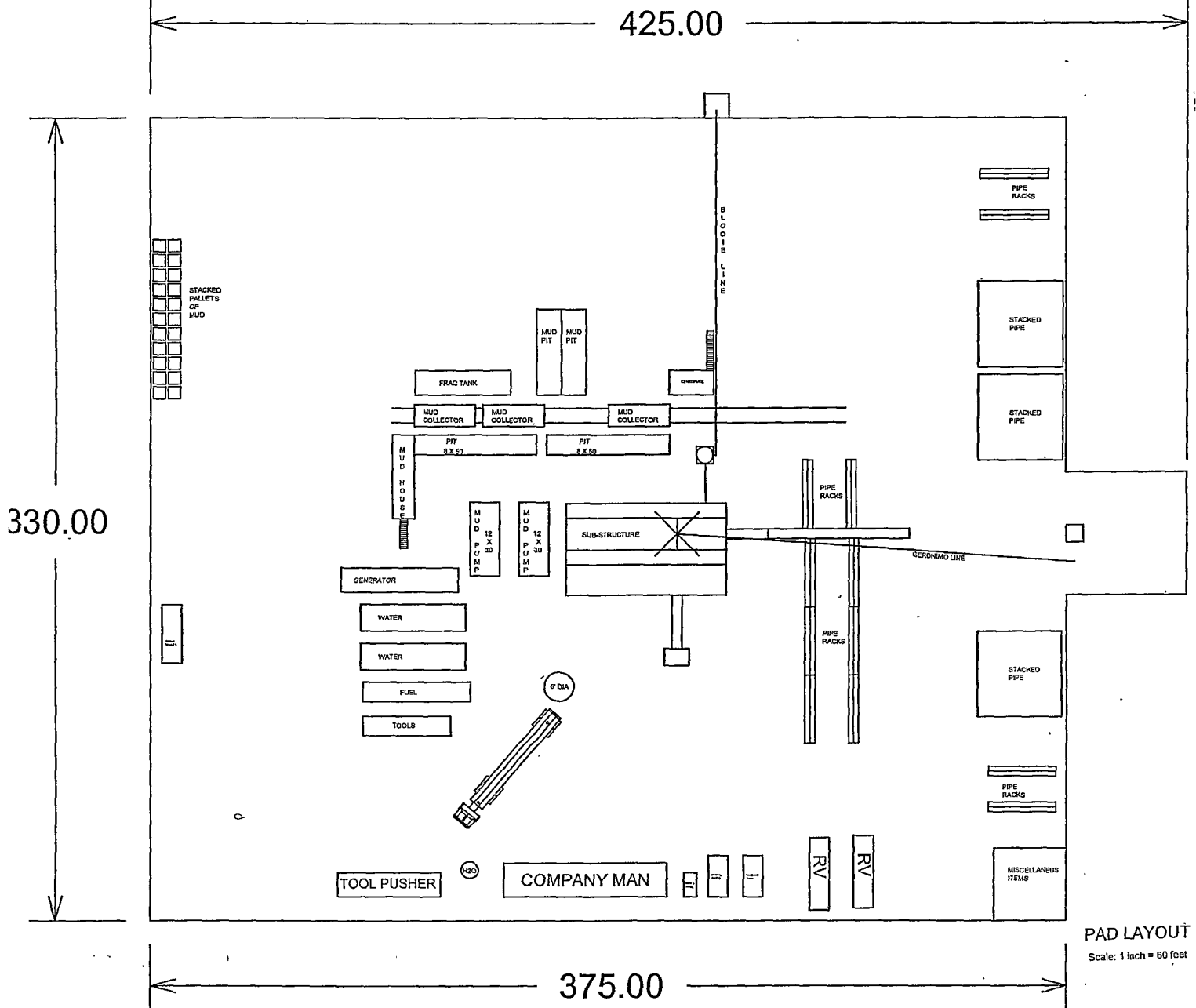
Eddy County, NM



Yates Petroleum Corporation
 Martha AIK Federal #7H
 1750' FNL & 200' FEL SHL
 1750' FNL & 330' FWL BHL
 Section 11, T22S-R31E
 Exhibit B



YATES PETROLEUM CORPORATION



PAD LAYOUT
 Scale: 1 inch = 60 feet

**Yates Petroleum Corporation
105 S. Fourth Street
Artesia, NM 88210**

Hydrogen Sulfide (H₂S) Contingency Plan

For

Martha AIK Federal #7H

1750' FNL and 200' FEL

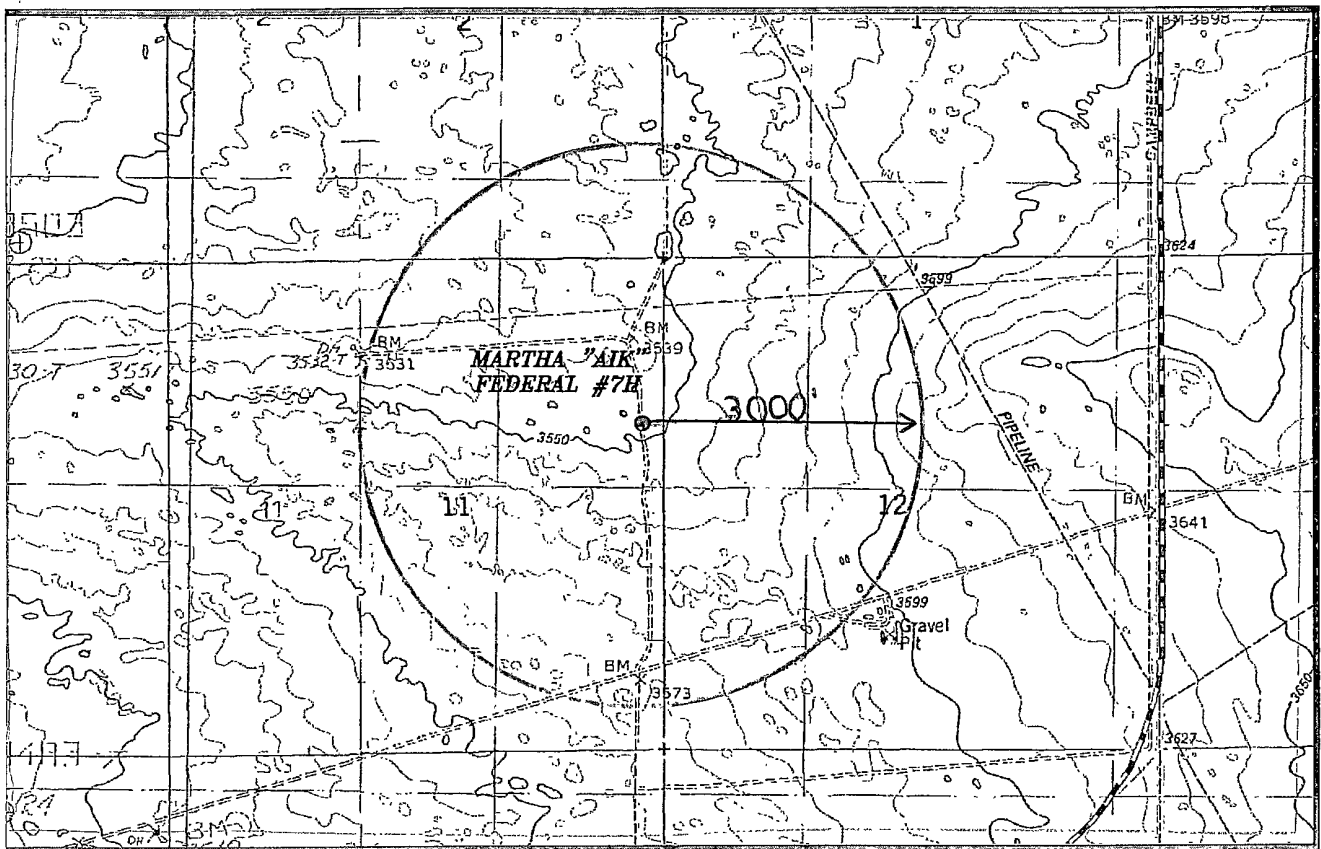
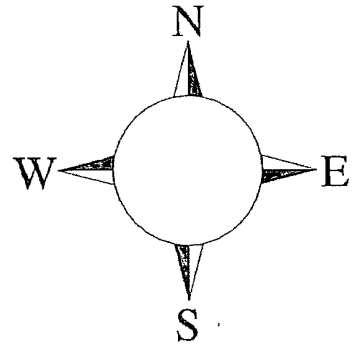
1750' FNL and 330' FWL

Section 11, T22S-R31E

Eddy County NM

Martha AIK Federal #7H

This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.



Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the case of a release of gas containing H₂S, 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 H₂S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H₂S 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 (SO₂). 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 H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	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
Wade Bennett/Prod Superintendent	(575) 748-4236
LeeRoy Richards/Assistant Prod Superintendent	(575) 748-4228
Mike Larkin/Drilling	(575) 748-4222
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

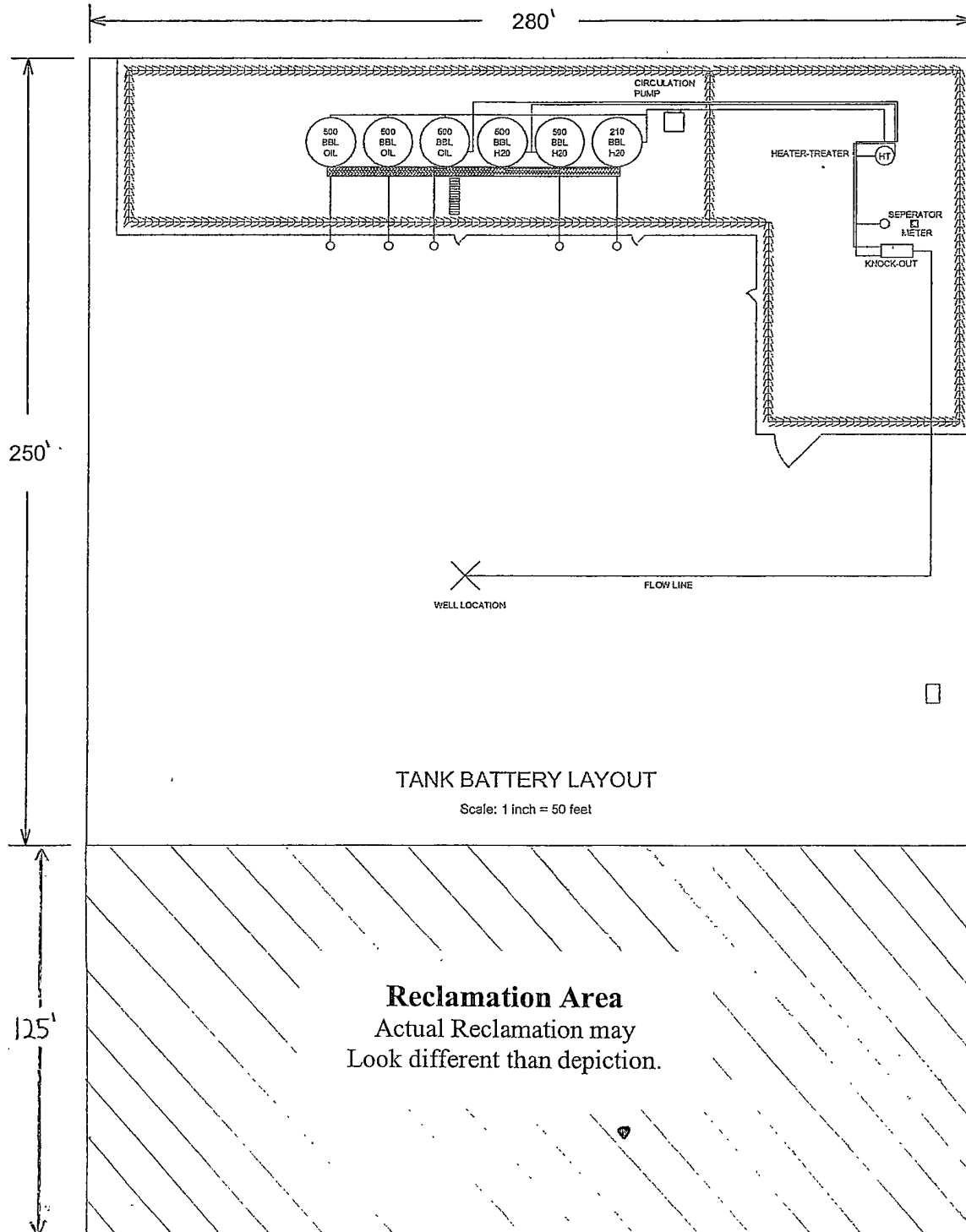
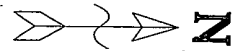
Other

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

Yates Petroleum Corporation
Martha AIK Federal #7H
1750' FNL & 200' FEL SHL
1750' FNL & 330' FWL BHL
Section 11, T22S-R31E
Eddy County, NM



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	YATES PETROLEUM CORPORATION
LEASE NO.:	NM-65417
WELL NAME & NO.:	MARTHA AIK FEDERAL #7H
SURFACE HOLE FOOTAGE:	1750' FNL & 200' FEL
BOTTOM HOLE FOOTAGE:	1750' FNL & 330' FWL
LOCATION:	Section 11, T.22 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Lesser Prairie-Chicken Timing Stipulations
 - Ground-level Abandoned Well Marker
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Logging Requirements
 - R-111-P Potash
 - WIPP Requirements
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☒ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**