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OCD-HOBBS

ATS-08-1058

Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Split Estate

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC 032591A

6. If Indian, Allotee or Tribe Name
N/A

1a. Type of work: ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No.
WBDU

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☑ Multiple Zone

8. Lease Name and Well No. <37346>
West Blinebry Drinkard Unit # 127

2. Name of Operator APACHE CORPORATION <873>

9. API Well No.
30-025- 39381

3a. Address 6170 S. Yale, Tulsa, OK 74136

3b. Phone No. *(include area code)*
(918) 491-4900

10. Field and Pool, or Exploratory
N. Eunice Blinebry-Tubb-Drinkard Pool

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 755' FNL & 990' FEL Unit A
At proposed prod. zone 1330' FNL & 980' FEL Unit H

11. Sec., T. R. M. or Blk. and Survey or Area
Section 21., T. 21 S., R. 37 E.

14 Distance in miles and direction from nearest town or post office*
1.5 miles North of Eunice, NM

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
775 Ft.	80	40
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19 Proposed Depth**	**20 BLM/BIA Bond No. on file**
170 Ft.	6825'	CO 1463 nationwide
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3435 Ft.	03/01/2009	approx 7 - 10 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)*	Date
Vernon D. Dyer	Vernon D. Dyer	11/19/2008

Title: Agent

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson	/s/ Don Peterson	FEB 24 2009

Title: FOR FIELD MANAGER

Office: CARLSBAD FIELD OFFICE

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

APPROVAL FOR TWO YEARS

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

(Continued on page 2)

*(Instructions on page 2)

CAPITAN CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

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HOBBSOCD

State of New Mexico
Energy, Minerals and Natural Resources Department

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

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025-39381	22900	N Eunice Blinebry-Tubb-Drinkard

Property Code	Property Name	Well Number
37346	WEST BLINEBRY DRINKARD UNIT	127

OGRID No.	Operator Name	Elevation
873	APACHE CORPORATION	3435'

Surface Location

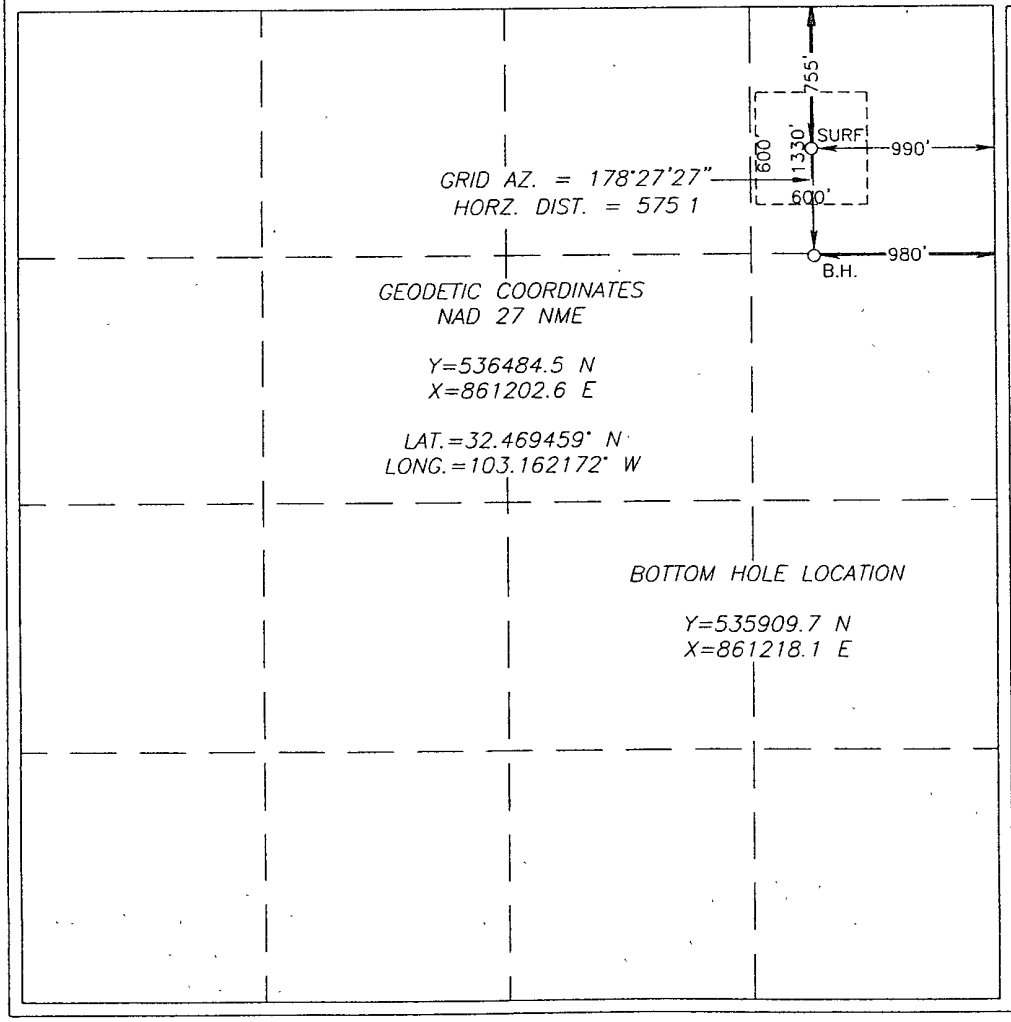
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	21	21-S	37-E		755	NORTH	990	EAST	LEA

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
H	21	21-S	37-E		1330	NORTH	980	EAST	LEA

Dedicated Acres	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



OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 1/27/09

SAM HAMPTON
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

RONALD J. EIDSON
SEPTEMBER 3, 2008
NEW MEXICO
12641
PROFESSIONAL SURVEYOR

Date Surveyed: JC

Signature & Seal of Professional Surveyor

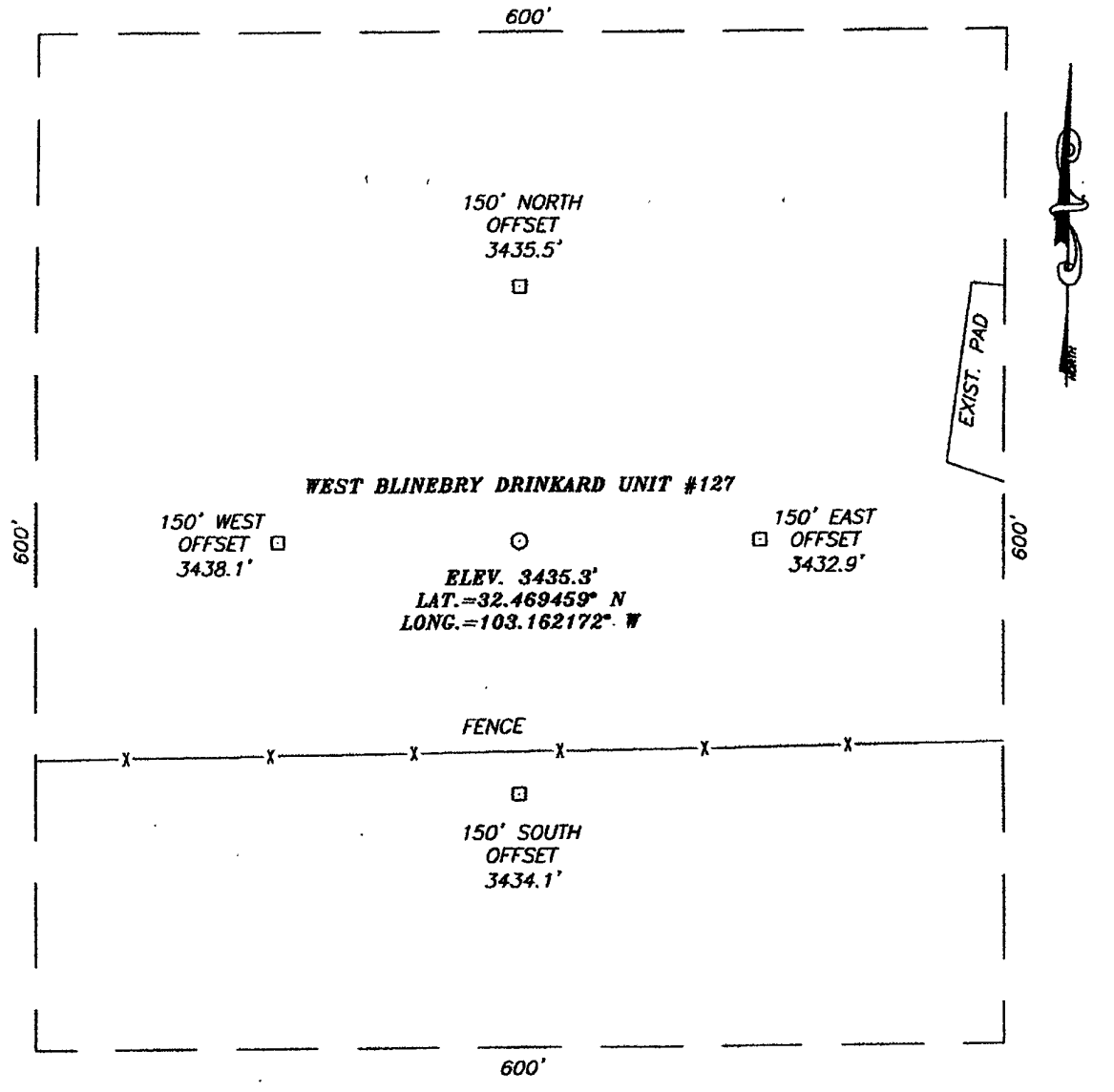
Ronald J. Eidson 9/09/08

08.11.1395

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

SECTION 21, TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #207 AND HILL ROAD, GO SOUTH ON ST. HWY. #207 APPROX. 0.5 MILES. TURN RIGHT AND GO WEST APPROX. 0.1 MILES. TURN RIGHT AND GO NORTH APPROX. 270' TO EXISTING ELLIOT A #1 WELL. THIS LOCATION IS APPROX. 300 FEET WEST.

100 0 100 200 Feet

Scale:1"=100'

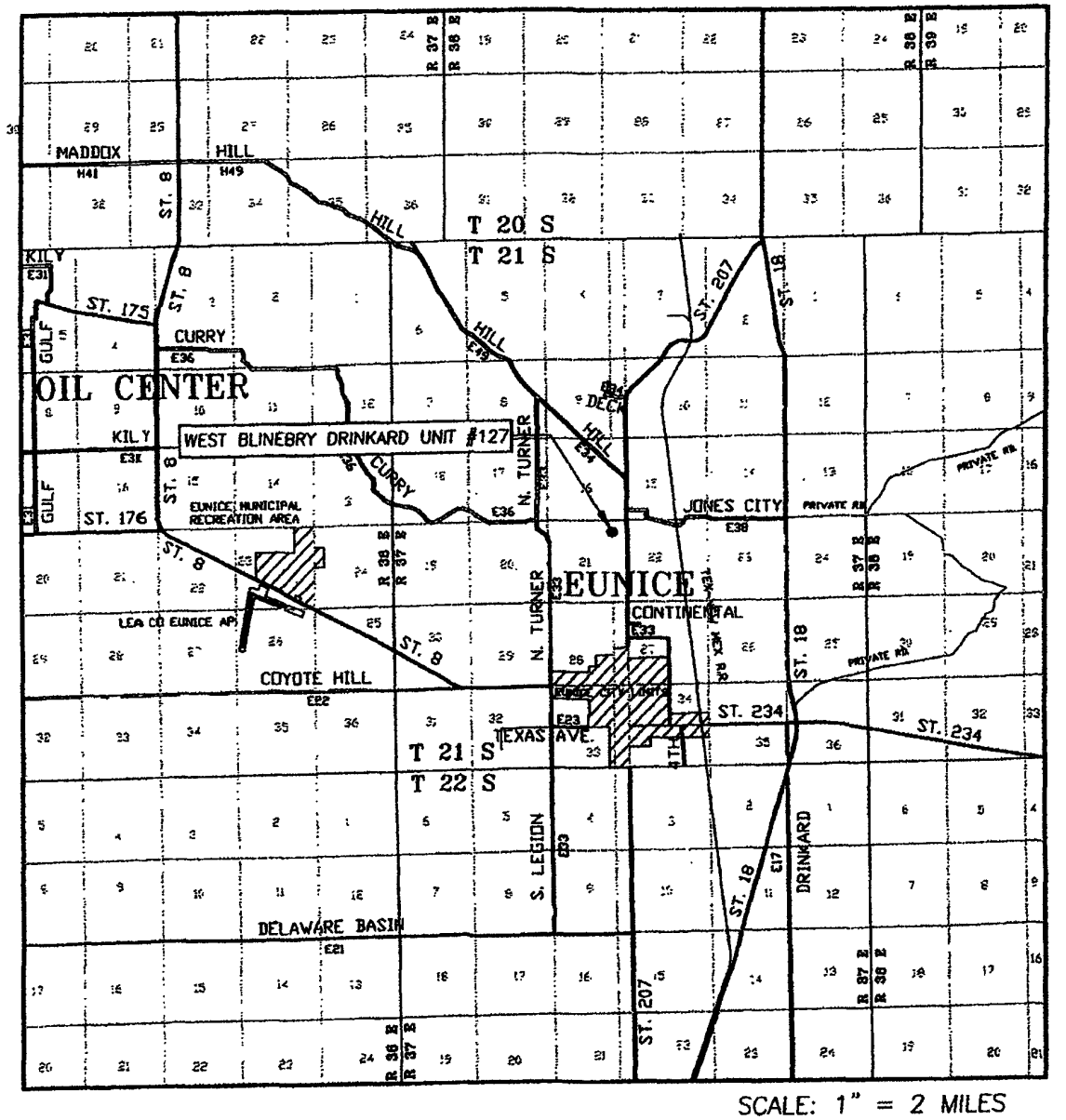
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

APACHE CORPORATION

WEST BLINEBRY DRINKARD #127
LOCATED 755 FEET FROM THE NORTH LINE
AND 990 FEET FROM THE EAST LINE OF SECTION 21,
TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 09/03/08	Sheet 1 of 1 Sheets		
W.O. Number: 08.11.1395	Dr By: JC		Rev 1:N/A
Date: 09/08/08		08111395	Scale:1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 21 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 755' FNL & 990' FEL

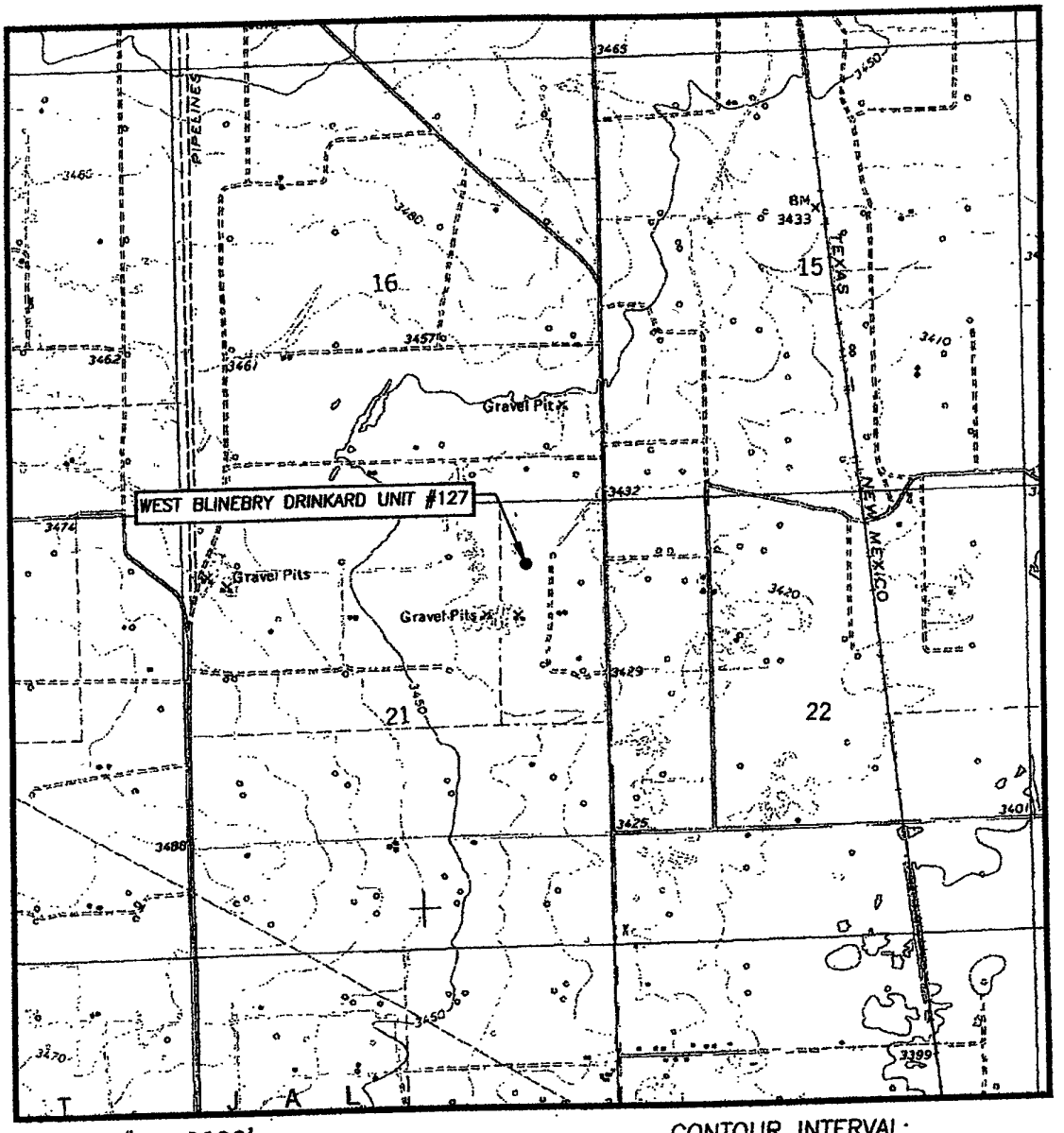
ELEVATION 3435'

OPERATOR APACHE CORPORATION

LEASE WEST BLINEBRY DRINKARD UNIT

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
EUNICE, N.M. – 10'

SEC. 21 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 755' FNL & 990' FEL

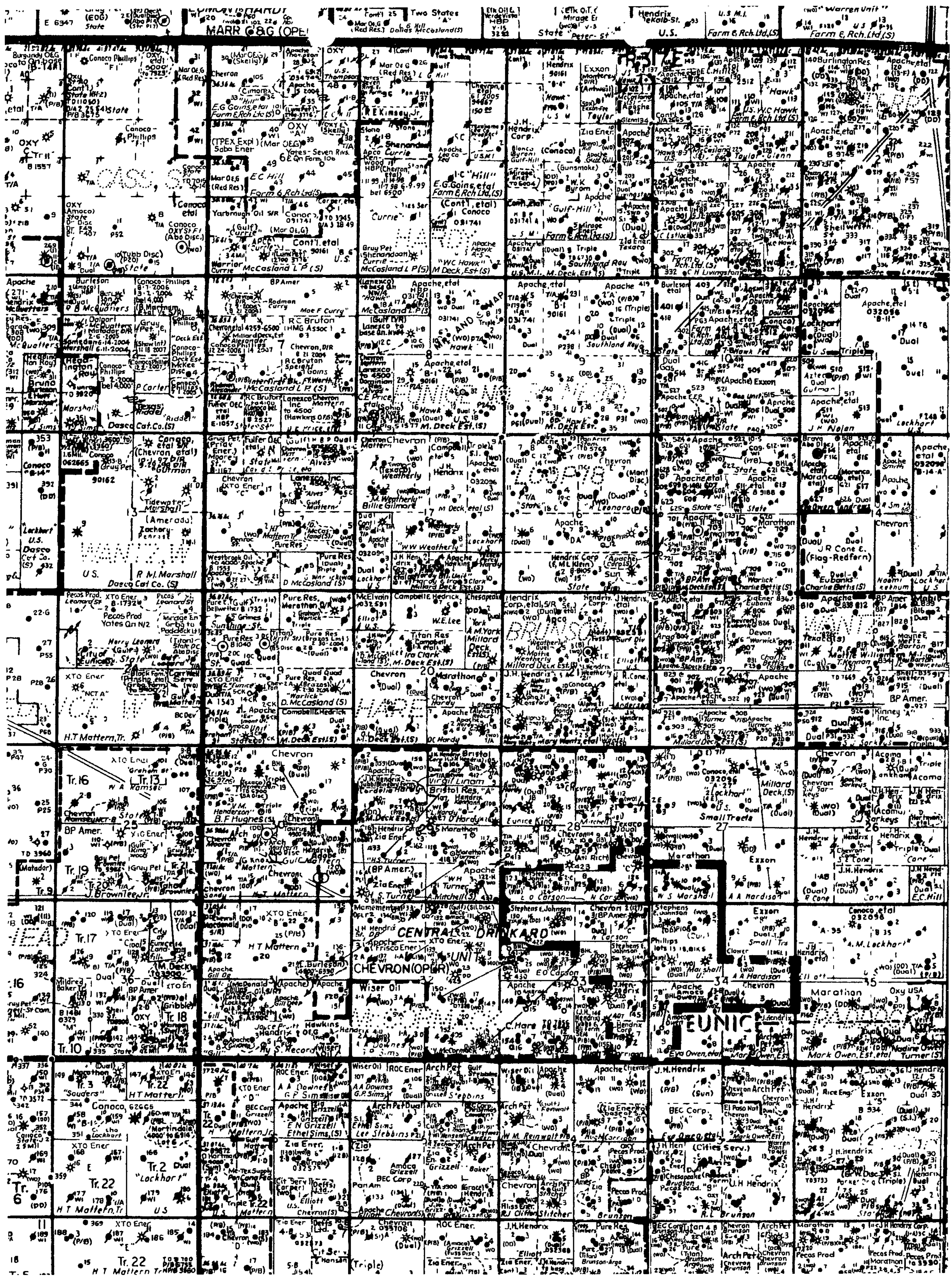
ELEVATION 3435'

OPERATOR APACHE CORPORATION

LEASE WEST BLINEBRY DRINKARD UNIT

U.S.G.S. TOPOGRAPHIC MAP
EUNICE, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117



CENTRAL DRINKARD
UNI
CHEVRON(OPER)
EUNICE
Wiser Oil
BP Amer.
XTO Ener
H T Mattern, Tr
Small Tracts
Exxon
Marathon
Apache
Conoco Phillips
Farm & Rch.Ltd.(S)
McCasland L P (S)
M. Deck Est.(S)
Southland Roy
Millard Deck Est.(S)
Charlie Bettis (S)
Mark Owen, Est.etal
Eva Owen,etal

Application
Apache Corporation
WEST BLINEBRY DRINKARD UNIT # 127
DIRECTIONAL WELL PLAN

Surface Location
755' FNL, 990' FEL
NE ¼ of Section 21-A, Township 21 South, Range 37 East, N.M.P.M.

Bottom Hole Location
BHL: 1330' FNL & 980' FEL
NE ¼ of Section 21-H, Township 21 South, Range 37 East, N.M.P.M.
Lea County, New Mexico

DRILLING PROGRAM

1. The geological surface formation is recent Permian with quaternary alluvium and other surficial deposits.

2. Estimated Tops of Geological Markers:

FORMATION	DEPTH
Quaternary alluvials	Surface
Rustler	1238'
Yates	2643'
Seven Rivers	2866'
Queen	3421'
Grayburg	3708'
San Andres	3961'
Glorieta	5130
Blinebry Marker	5585
Tubb	6071
Drinkard	6380
Abo	6663
TD	6825'

Estimated depths at which water, oil, gas, or other mineral-bearing formations are expected to be encountered:

SUBSTANCE	DEPTH
Oil	Blinebry 5585'
	Tubb 6071'
	Drinkard 6380'
Gas	None anticipated
Fresh Water	None anticipated

All fresh water and prospectively valuable minerals (as described by BLM) encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows within zones of correlative rights will be tested to determine commercial potential.

3. **Proposed Casing Program: Casing condition is new pipe and the Safety Factors in accordance with Onshore Orders are:**

Collapse =1.125 psi,
Burst = 1.0 psi
Tension = 1.8 psi

Factors don't have units

HOLE SIZE	CASING SIZE OD / ID	GRADE	WEIGHT PER FOOT	DEPTH/LENGTH	SACKS CEMENT	ESTIMATED TOC - REMARKS
12 ¼"	8 5/8" 8.097"	J55 STC	24#	1,300' / 1,300'	650	TOC - Surface 8.9 ppg Water-based Mud; 89 ° F Est. Static Temp; 83 ° F Est. Circ. Temp.
7 7/8"	5 ½" 4.892"	J55 LTC	17#	6,825' / 6,825'	1,150	TOC – Surface Float Collar set @ 4,360"/ 10.10 ppg Brine Mud; 109 ° F Est. Static Temp; 100 ° F Est. Circ. Temp.

4. Proposed Cement Program:

CASING	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
8 5/8"	450 sacks Class C Cmt + 3% Salt + 4% bentonite + 3 lbs/sk LCM-1 + 0.125 lbs/sk Cello Flake 795 Vol. Cu Ft 1.7 Vol. Factor Slurry Weight (ppg) 13.5 Slurry Yield (cf/sack) 1.767 Amount of Mix Water (gps) 9.025 Estimated Pumping Time – 70 BC (HH:MM) 4:08	200 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 270 Vol. Cu Ft 1.3 Vol. Factor Slurry Weight (ppg) 14.8 Slurry Yield (cf/sack) 1.35 Amount of Mix Water (gps)6.35 Estimated Pumping Time – 70 BC (HH:MM)-2:47;	79.9 bbls Fresh Water @ 8.33 ppg

8 5/8" Casing: Volume Calculations:

1,300 ft	x	0.4127 cf/ft	with 75% excess	=	938.5 cf
44 ft	x	0.3576 cf/ft	with 0% excess	=	15.7 cf (inside pipe)
		TOTAL SLURRY VOLUME		=	954.2 cf
				=	169.9 bbls

Spacer 20.0 bbls Water @ 8.33 ppg

CASING	LEAD SLURRY	TAIL SLURRY	DISPLACEMENT
5 ½"	800 sacks (35:65) Poz (Fly Ash): Class C Cement + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 3 lbs/sk LCM + 0.005 gps FP-6L + 6% bwoc Bentonite + 0.5% bwoc FL-52A 1,640 Vol. Cu Ft 2.0 Vol. Factor Slurry Weight (ppg) 12.5 Slurry Yield (cf/sack) 2.05 Amount of Mix Water (gps) 10.92; Estimated Pumping Time – 70 BC (HH:MM)-4:00;	350 sacks (50:50) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride +0.2% bwoc FL-52A + 0.6% bwoc FL-25 + 0.25 lb/sk Cello Flake + 3 lbs/sk LCM + 2% bwoc Bentonite 455 Vol. Cu Ft 1.3 Vol. Factor Slurry Weight (ppg) 14.2 Slurry Yield (cf/sack) 1.30 Amount of Mix Water (gps) 5.55; Estimated Pumping Time – 70 BC (HH:MM)-4:00;	157.6 bbls 2% Kcl Water @ 8.43 ppg

5 ½" Casing: Volume Calculations:

1,300 ft	x	0.1926 cf/ft	with 0% excess	=	250.3 cf
3,700 ft	x	0.1733 cf/ft	with 100% excess	=	1,281.4 cf
1,825 ft	x	0.1733 cf/ft	with 50% excess	=	474.0 cf
40 ft	x	0.1305 cf/ft	with 0% excess	=	5.2 cf (inside pipe)
		TOTAL SLURRY VOLUME		=	2,010.9 cf
		Total Volume in BBLS:		=	358.1 bbls

All slurries will be tested prior to loading to confirm thickening times and a lab report furnished to Apache. Fluid loss will be tested and reported on slurries with fluid loss additives. Lab test report will be furnished prior to pumping cement.

5. Proposed Pressure Control Equipment:

Will install on the 8 5/8" surface casing a 9" x 3000 psi WP Double Ram BOP with Annular, and will test using a 3rd party tester before drilling out of surface casing. **As maximum anticipated surface pressures do not exceed 2,000 psi, we request a waiver to test the BOP to 2,000 psi.** See Exhibit 3,000 psi BOPE attached and Bottom hole pressure calculations below.

Bottom Hole Pressure Calculations

The maximum anticipated bottom hole pressure is calculated y multiplying the depth of the well by 0.44. The maximum anticipated surface pressure is calculated assuming one half of the hole is evacuated of the drilling fluid required to control the maximum anticipated bottom hole pressure.

For the West Blinebry Drinkard Unit #127 the maximum anticipated bottom hole pressure is 6,825' x 0.44 psi/ft = 3,003 psi.

The maximum anticipated surface pressure assuming one half of the hole is evacuated of the mud required to contain the bottom hole pressure is 3,003 psi – (3,003 psi/2) = 1,501.5 psi.

6. Proposed Mud Program

DEPTH	MUD PROPERTIES	REMARKS
0 – 1,300'	Weight: 8.6 – 9.2 ppg Viscosity: 34 – 36 sec/qt pH: NC Filtrate: NC	Spud with a Conventional New Gel/Lime "Spud mud". Use NewGel and native solids to maintain a sufficient viscosity to keep the hole clean. Mix Paper one-two sacks every 100 feet drilled to minimize wall cake build up on water sands and to control seepage loss. At TD of interval, mix in pre-mix pit, 100 barrels of system fluid, NewGel viscosity of 60 sec/100cc, add 0.25 ppb of Super Sweep.
1,300'-6,500'	Weight: 9.8 – 10.4 ppg Viscosity: 32 – 34 sec/qt pH: NC Filtrate: NC	Drill out from under the surface casing with Brine Water. Paper should be added at 2 bags after every 100' drilled to control seepage losses. Mix one gallon of New-55 at flowline every 250 feet drilled to promote solids settling. Sweep hole with 3-ppb of Super Sweep every 500 feet.
6,500' – TD	Weight: 10.0 – 10.4 ppg Viscosity: 34 – 36 sec/qt pH: 9-10 Filtrate: 15-20 cm/30 min	From 6,500' to Total Depth, it is recommended the system be restricted to the working pits. Adjust and maintain pH with Caustic Soda. Treat system with Newcide to prevent bacterial degradation of organic materials. Mix Starch (yellow) to control API filtrate at <15cc-20cc.

7. Auxiliary Equipment:

9" x 3000 psi double BOP/blind & pipe rams and annular
41/2" x 3000 psi Kelly valve
9" x 3000 psi mud cross – H_2S detector on production hole
Gate-type safety valve 3" choke line from BOP to manifold
2" adjustable chokes – 3" blowdown line

8. Logging Program:
The following logs may be run:
CNL, Litho Density, GR, CAL, Dual Laterolog/MSFL, Sonic from TD-1300'
CNL, GR from TD-Surface

Mudlogging Program:
There are no plans to utilize a mud logging service on this well.

9. Potential Hazards:
No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. The estimated maximum bottom hole pressure is 1,900 psi., estimated BHT is 115°F. No H_2S is anticipated.

10. Anticipated Starting Date:
When drilling rig becomes available.

Directional Drilling Plan
The well will be drilled vertically from surface to a kick-off depth of approximately 1,740'. Inclination will be build at a rate of approximately 2°/100' to an angle of approximately 10° in the direction of the bottom hole location. Once the 10° is reached this inclination will be maintained to a measured depth of approximately 5,050' at which point the inclination will be dropped at a rate of approximately 2°/100' until the well is vertical. The well will be maintained approximately vertical through the potential pay zones until reaching a true vertical depth of 6,825' (approximately 6,873' measured depth). See Exhibit II Directional Well Planner attached.

Directional Well Planner

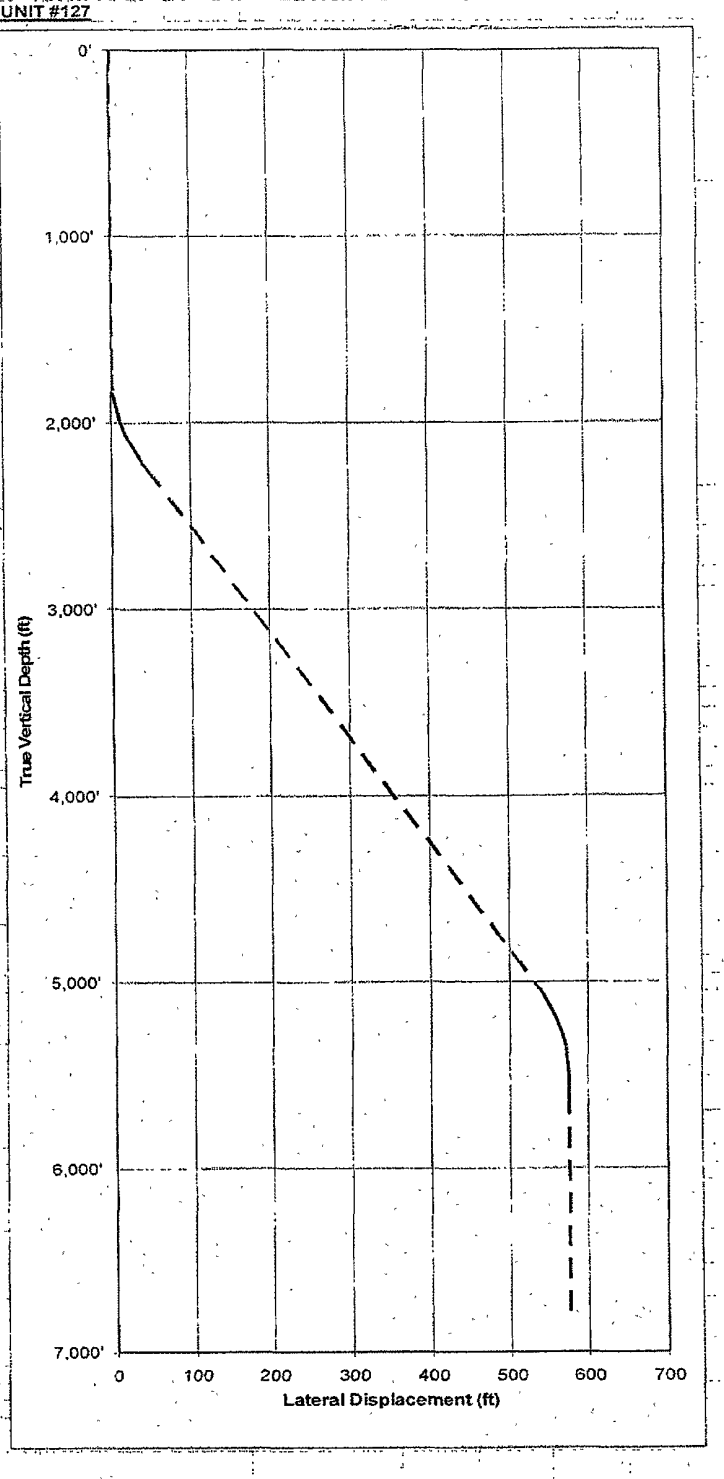
APACHE CORPORATION
WEST BLINEBRY DRINKARD UNIT #127

	Sec	FNL	FEL
Surface Location	21	755'	990'
Btm Hole Location	21	1,330'	980'
Displacement (N/S & E/W)		575'	10'
Direction (Surf -> BHL)		S	E
Direction (deg.)			**179.00 °**
Total Displacement			**575'**
Surface Casing			1,300'
Target Depth			5,550'
Btm Hole Loc Depth			6,825'

Surface Casing Depth	1,300'
Kick Off Depth	1,740'
Max. Build / Drop (deg /100')	2.0

Built & Hold & Drop

	TMD	Inclination	Lat. displacement	TVD
	0'	0	0	0'
Kick Off	1,740'	0.0	0.0	1,740.0'
	1,840'	2.0	1.7	1,840.0'
	1,940'	4.0	7.0	1,939.9'
	2,040'	6.0	15.7	2,039.5'
	2,140'	8.0	27.9	2,138.7'
	2,240'	10.0	43.5	2,237.5'
	3,645'	10.0	287.5	3,621.1'
	5,050'	10.0	531.5	5,004.8'
	5,150'	8.0	547.1	5,103.6'
	5,250'	6.0	559.3	5,202.8'
	5,350'	4.0	568.0	5,302.4'
	5,450'	2.0	573 3	5,402.3'
	5,550'	0.0	575.0	5,502.3'
	5,650'	0.0	575.0	5,602.3'
	6,873'	0.0	575.0	6,825.0'



SURFACE USE PLAN

formerly Elliott A #6

Apache Corporation

VERTICAL GEOLOGIC WELL PROGNOSIS

TW-08-00606

[X] NEW WELL FOR ECONOMICS

[ ] DEEPENING

WELL NAME & NUMBER	OPERATOR	PROSPECT NAME
WEST BLINEBRY DRINKARD UNIT #127	APACHE	EUNICE AREA (NM4017)

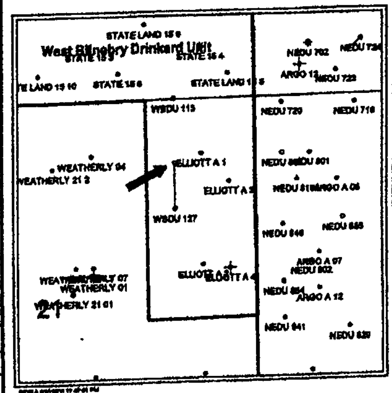
LOCATION (Footage, Sec, T & R/Survey, Block, Section)	COUNTY	STATE
SL: 770 FNL & 950 FEL BHL: 1320 FNL & 980 FEL	LEA	NM

DEEPEST OBJECTIVE	ESTIMATED PRIMARY OBJECTIVE THICKNESS	WELL TYPE COMPLETION (Oil, Gas - Pumping or Flowing)	TOTAL DEPTH
Drinkard	140	Oil & Gas - Pumping	6825

SPACING	WI	NRI	COMMENCE DRLG	
40	74.00%	64.00%		

LOCATION OF NEAREST HORIZONTAL OR VERTICAL PRODUCTION FROM OBJECTIVE HORIZON

Operator	Well Name	Well No	County	State
Apache Corporation	Elliott A	1	Lea	NM



FORMATION TOPS

EST ELEV: 3450 REFERENCE: KB

FORMATION	TOPS Estimated	TOPS Actual	SUBSEA ELEV (TVD) Estimated	SUBSEA ELEV (TVD) Actual	STRUCTURAL COMPARISON Estimated	STRUCTURAL COMPARISON Actual
Rustler	1238		2212		-19	
Yates	2643		807		-29	
Seven Rivers	2866		584		-35	
Queen	3421		29		-20	
Grayburg	3708		-258		-26	
San Andres	3961		-511		-18	
Glorieta	5130		-1680		-1	
Blinebry Marker	5585		-2135		-3	
Tubb	6071		-2621		-11	
Drinkard	6380		-2930		-13	
Abo	6663		-3213		-14	

CORRELATION WELL

OPERATOR	Apache Corporation	
Well Name & No	State Land 15 #6	
LOCATION	COUNTY	STATE
330 FSL & 1650 FEL Section 16, T212S-R37E	Lea	NM
ELEV: 3451	REFERENCE: KB	

ELECTRIC LOG	SUBSEA
1220	2231
2615	836
2832	619
3402	49
3683	-232
3944	-493
5130	-1679
5583	-2132
6061	-2610
6368	-2917
6650	-3199

ZONES CAPABLE OF PRODUCING HYDROCARBONS

ZONE	TOPS Est.	TOPS Actual	TYPE OBJECTIVE Primary	TYPE OBJECTIVE Secondary	DEPLETED (BHP)	GEO PRESSURED (BHP)	THICKNESS Gross	THICKNESS Net	CORE/DST
Blinebry	5585		Acid & Frac		1700		250	70	
Tubb	6071		Acid & Frac		1800		200	30	
Drinkard	6380		Acid & Frac		1900		240	40	

ANALOGOUS COMPLETIONS	MUD LOGGER	
Apache State DA #11	UNIT ON BY:	
	SAMPLES FROM:	TO: TD
	SAMPLE INTERVAL (FT.):	

APACHE CONTACT		NAME	ADDRESS	AC	HOME	CELL	OFFICE
GEOL		Bob Curtis	APACHE CORPORATION 6120 S. Yale, Ste 1500 Tulsa, Oklahoma 74136	918	252-3911	906-5342	491-4924
GEOPHY							
LAND		Mario Moreno		918	249-5265	527-4298	491-4963
ENGINEER	RES	Keevin Barnes		918		557-8888	491-4919
	DLG	Sam Hampton		918		978-0121	491-4945
	PROD	Clint Mills		918			491-970

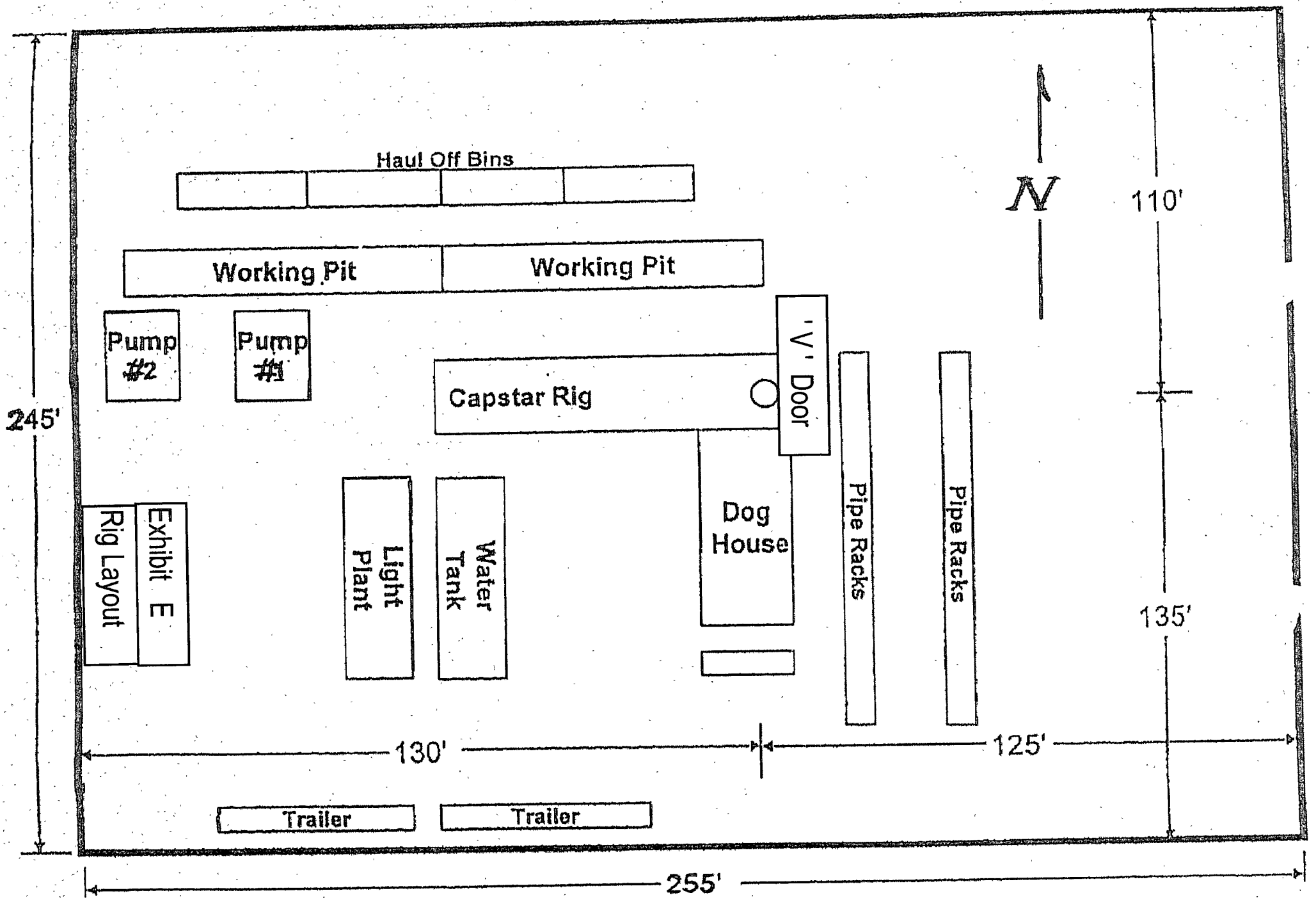
REMARKS (Logging Program, Casing Program, Misc. Recommendations)

E-Log Program:	Litho-Density, Dual Laterolog/MSFL, Sonic	Cost: $16,000
Mud Log Program:		Cost:

COMMENTS

FED Lease
North Eunice Blinebry-Tubb-Drinkard Pool
Hard line for directional at 990 FEL

RECOMMENDED BY: (GEOL)	RE Curtis	DATE:	8/26/2008	AUTHORIZED BY: (Mgr. Expl.)	David M. Allard	DATE:	


Haul Off Bins
N
110'
Working Pit
Working Pit
Pump #2
Pump #1
'V' Door
Capstar Rig
245'
Pipe Racks
Pipe Racks
Dog House
Water Tank
Light Plant
Exhibit E
Rig Layout
135'
130'
125'
Trailer
Trailer
255'

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Apache Corporation
LEASE NO.:	LC032591A
WELL NAME & NO.:	127 WBDU
SURFACE HOLE FOOTAGE:	755' FNL & 990' FEL
BOTTOM HOLE FOOTAGE	1330' FNL & 980' FEL
LOCATION:	Section 21, T. 21 S., R 37 E., NMPM
COUNTY:	Lea County, New Mexico

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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)

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1 through June 15 annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

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) 234-5972 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

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The operator has applied for a closed-loop system. The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. 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.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Blinebry** formation. **If Hydrogen Sulfide is encountered, please 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.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work.

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

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

Possible lost circulation in the Glorietta formation.

1. The **8-5/8 inch** surface casing shall be set at approximately **1300 feet** (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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 a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    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 **5-1/2** inch production casing is:

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

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

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17. **Operator has calculated a BHP based on the pressure gradient for the formation which indicates the BHP will not exceed 2000 psi. Therefore, a 2M system is approved.**

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

    a. The tests shall be done by an independent service company.

    b. The results of the test shall be reported to the appropriate BLM office.

c. 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.

d. 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.

D. DRILL STEM TEST

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

RGH 022009

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.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

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, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

Operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions 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 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.

Seed Mixture for LPC Sand/Shinnery 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	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

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

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.