

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

## State of New Mexico

Exhibit D-1

## DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

## 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 JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-38021	Pool Code 96601	Pool Name Penrose Skelly Grayburg
Property Code 24426	Property Name HAWK A	Well Number 20
OGRID No. 0873	Operator Name APACHE CORPORATION	Elevation 3522'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	8	21-S	37-E		1510	NORTH	1370	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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40.00			NSL-5386<50>

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

	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  <i>Lana Williams</i> Signature Lana Williams Printed Name Sr. Dept. Clerk Title 3/14/06 Date
	<b>SURVEYOR CERTIFICATION</b>  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.  NOVEMBER 30, 2005 Date Surveyed Signature & Seal of Professional Surveyor GARY EIDSON 12/9/05 05.11.1822 Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641

## State of New Mexico

Exhibit D-1

## DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

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## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-38021	Pool Code 96601	Pool Name Hare; San Andres, East (Oil)
Property Code 24426	Property Name HAWK A	Well Number 20
OGRID No. 0873	Operator Name APACHE CORPORATION	Elevation 3522'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	8	21-S	37-E		1510	NORTH	1370	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
Dedicated Acres 40.00	Joint or Infill	Consolidation Code	Order No. NSL-5386<50>						

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<p>GEODETIC COORDINATES NAD 27 NME Y=546236.0 N X=855427.5 E LAT.=32°29'47.16" N LONG.=103°10'49.99" W</p>	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Lana Williams Signature Lana Williams Printed Name Sr. Dept. Clerk Title 3/14/06 Date
	<b>SURVEYOR CERTIFICATION</b>  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.  NOVEMBER 30, 2005 Date Surveyed JR Signature & Seal of Professional Surveyor GARY EIDSON 12/9/05 05.11.1822
	Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12841

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1625 N. FRENCH DR., HOBBS, NM 88240

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## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-38021	Pool Code 76520	Pool Name Eunice San Andres N/Gas
Property Code 24426	Property Name HAWK A	Well Number 20
OGRID No. 0873	Operator Name APACHE CORPORATION	Elevation 3522'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	8	21-S	37-E		1510	NORTH	1370	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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			NSL-5386 (SD)

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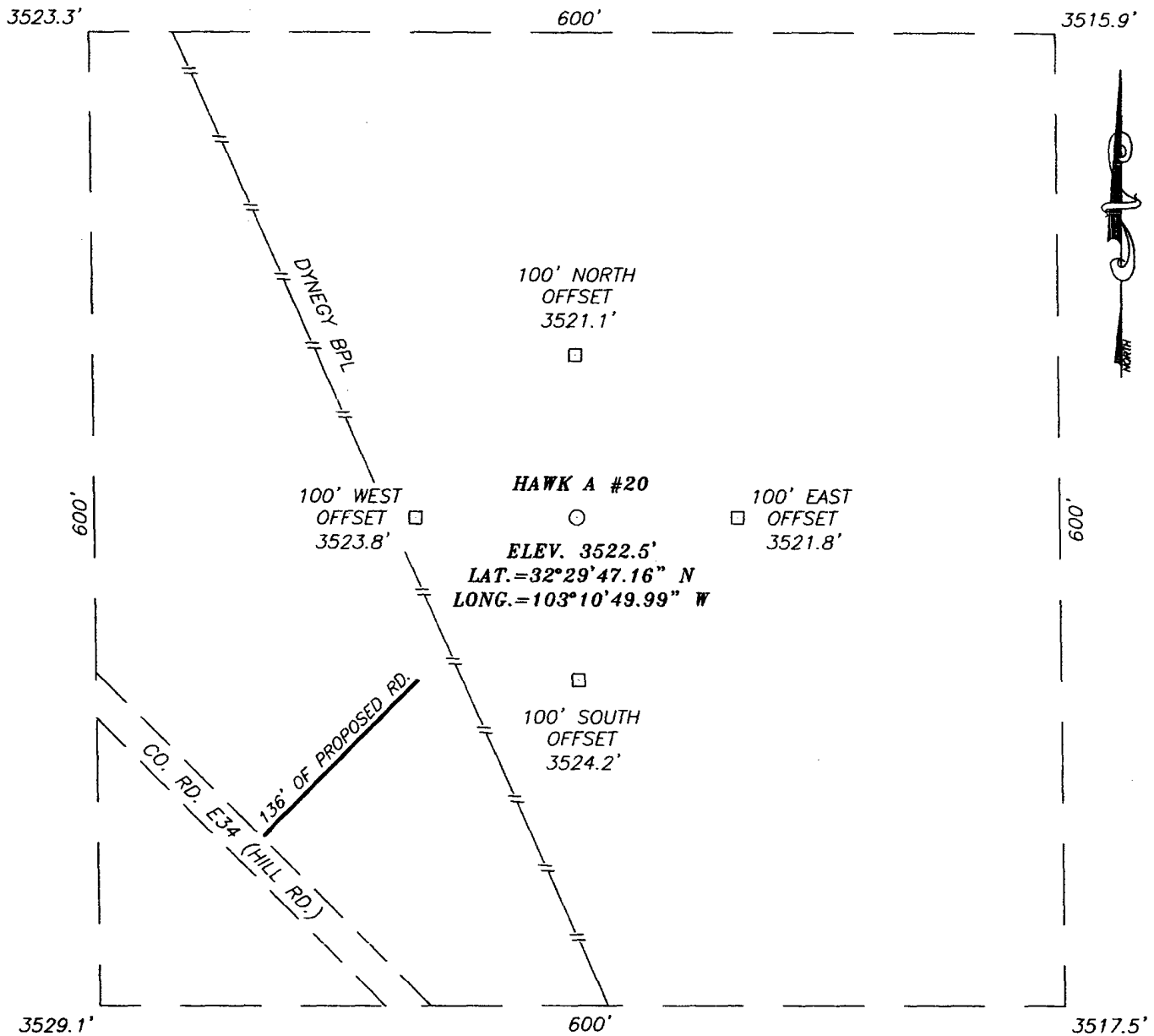
<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=546236.0 N X=855427.5 E</p> <p>LAT.=32°29'47.16" N LONG.=103°10'49.99" W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Lana Williams</i> Signature</p> <p>Lana Williams Printed Name</p> <p>Sr. Dept. Clerk Title</p> <p>3/14/06 Date</p> <p><b>SURVEYOR CERTIFICATION</b></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>NOVEMBER 30, 2005</p> <p>Date Surveyed _____ JR</p> <p>Signature &amp; Seal of Professional Surveyor <i>Ronald J. Eidson</i> RONALD J. EIDSON 05.11.1822</p> <p>Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12841</p>
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# SECTION 8, TOWNSHIP 21 SOUTH, RANGE 37 EAST,

Exhibit D-2

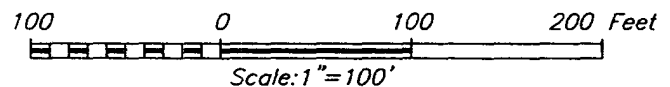
LEA COUNTY,


NEW MEXICO



## DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #207 AND CO. RD. E34 (HILL RD.) GO NW ON CO. RD. E34 APPROX. 1.8 MILES. THIS LOCATION IS APPROX. 300' EAST.





PROVIDING SURVEYING SERVICES  
SINCE 1948  
**JOHN WEST SURVEYING COMPANY**  
412 N. DAL PASO  
HOBBS, N.M. 88240  
(505) 393-3117

## APACHE CORPORATION

HAWK A #20 WELL  
LOCATED 1510 FEET FROM THE NORTH LINE  
AND 1370 FEET FROM THE EAST LINE OF SECTION 8,  
TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.

Survey Date: 11/30/05	Sheet 1 of 1 Sheets
W.O. Number: 05.11.1822	Dr By: J.R.
Date: 12/07/05	Disk: CD#5
05111822	Scale: 1"=100'

## DISTRICT I

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## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name <b>HAWK A</b>	Well Number <b>20</b>
OGRID No.	Operator Name <b>APACHE CORPORATION</b>	Elevation <b>3522'</b>

## Surface Location

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Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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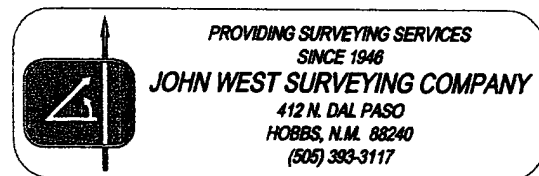
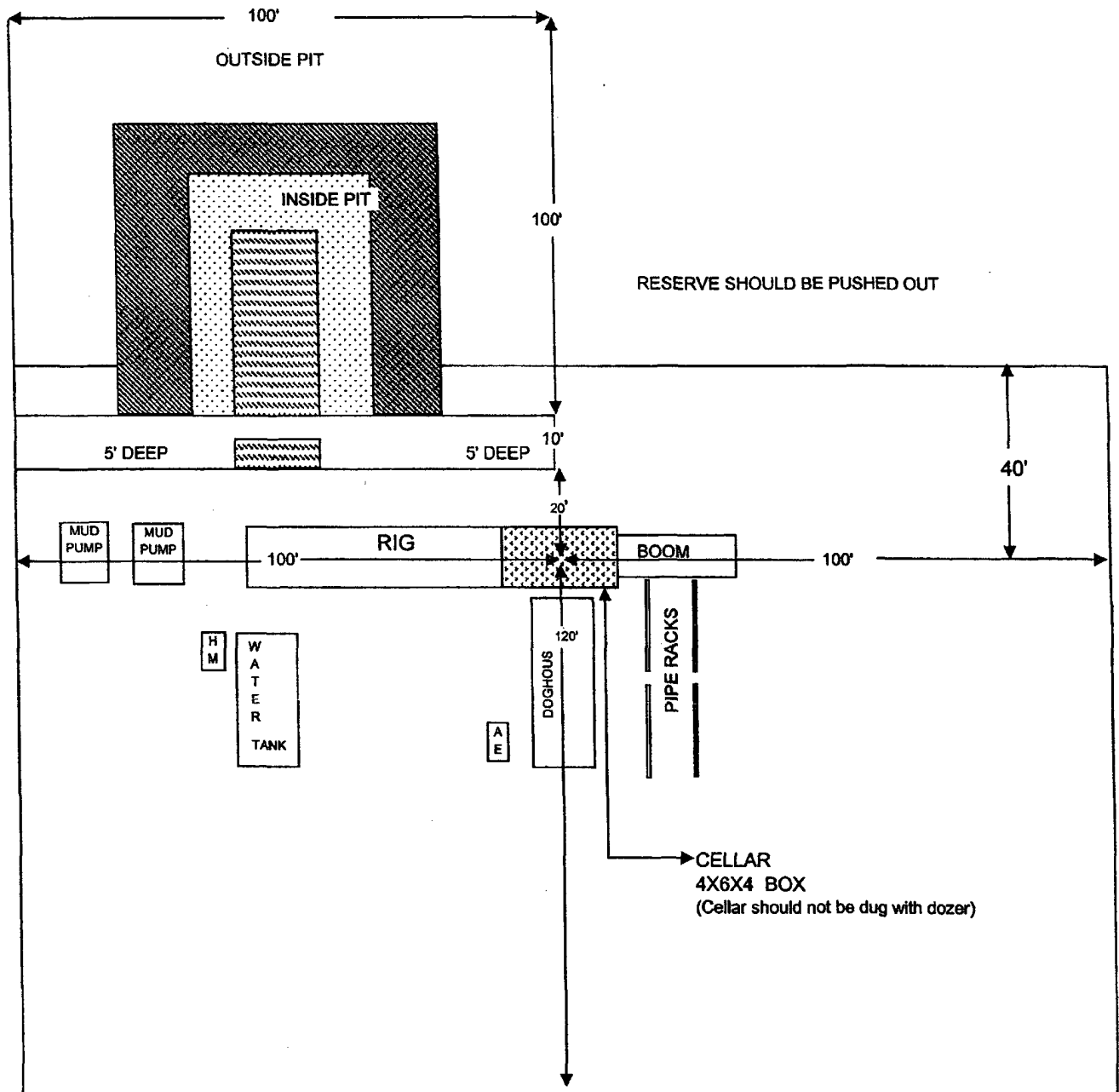


Exhibit G  
CapStar Drilling, Inc.  
LOCATION SPECIFICATIONS AND RIG LAYOUT  
FOR EARTH PITS



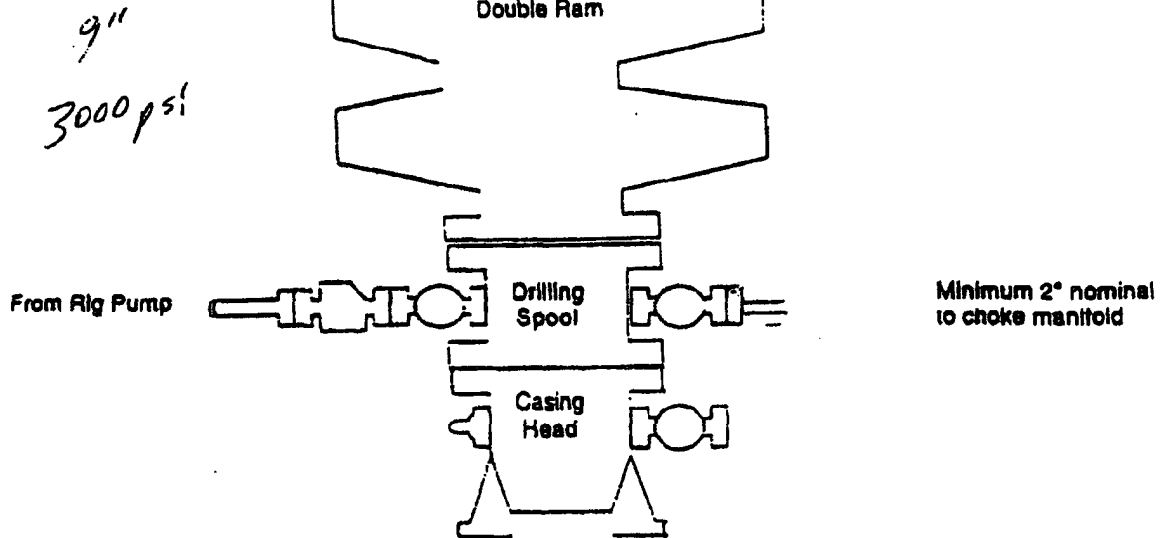
Cellar can be 4X4X4 if using a screw-on wellhead  
Working Pits dug 5' below ground level

# Exhibit H

## BOP Schematic

\*Note: If BOP is equipped w/ side outlets below the rams, a spool is not required.

3000 psi WP Double Ram  
Blow-out Preventor. Must be tested  
to 1000 psi prior to drilling out  
8-5/8" surface casing.



## Choke Manifold Schematic

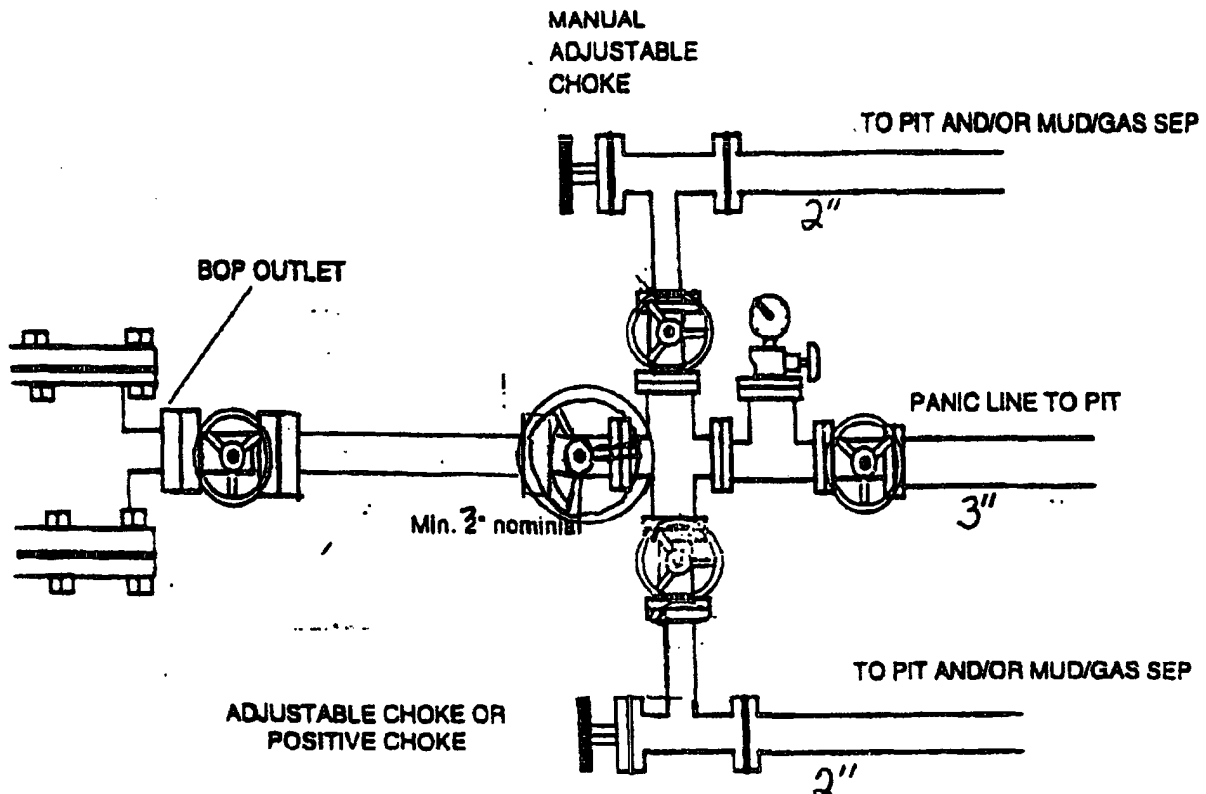


EXHIBIT "A"  
Hawk A # 20  
**DRILLING PROGRAM**

- I. The geological surface formation is recent Permian with quaternary alluvium and other surficial deposits.  
II. Estimated Tops of Geological Markers:

<u>FORMATION</u>	<u>DEPTH</u>
Quaternary alluvials	Surface
Rustler	1321'
Seven Rivers	2932'
Queen	3485'
Grayburg	3755'
San Andres	4050'
TD	4400'

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

<u>SUBSTANCE</u>	<u>DEPTH</u>
Oil	Grayburg@3755' San Andres@4050'
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.

- IV. A. Proposed Casing Program:

<u>HOLE</u>	<u>CASING</u>		<u>WEIGHT</u>		<u>SACKS</u>	<u>ESTIMATED TOC -</u>
<u>SIZE</u>	<u>SIZE</u>	<u>GRADE</u>	<u>PER</u>	<u>DEPTH</u>	<u>CEMENT</u>	<u>REMARKS</u>
12 1/4"	8 5/8"	J55 STC	24#	400'	400	TOC - Surface
	8.097"					8.9 ppg Water-based Mud; 89 ° F Est. Static Temp; 83 ° F Est. Circ. Temp.
Witness Surface Casing						
7 7/8"	5 1/2"	J55 LTC	17#	4,400'	850	TOC - Surface
	4.892"					Float Collar set @ 4355' / 10.10 ppg Brine Mud; 123 ° F Est. Static Temp; 104 ° F Est. Circ. Temp.

# B. Proposed Cement Program:

<u>CASING</u>	<u>LEAD SLURRY</u>	<u>TAIL SLURRY</u>	<u>DISPLACEMENT</u>
8 5/8"	400 sacks 35:65 Poz:Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.003 gps FP-6L + 6% bwoc Bentonite gel 536 Vol. Cu Ft 1.94 Vol. Factor Slurry Weight (ppg) 14.8 Slurry Yield (cf/sack) 1.34 Amount of Mix Water (gps) 6.29; <u>Estimated Pumping Time –</u> <u>70 BC (HH:MM)-4:00;</u>	NONE	24 bbls Fresh Water @ 8.33 ppg

## 8 5/8" Casing: Volume Calculations:

360 ft	x	0.4127 cf/ft	with 100% excess	=	148.57 cf
40 ft		x 0.8214 cf/ft	with 0% excess	=	32.8 cf
40 ft	x	0.3576 cf/ft	with 0% excess	=	14.3 cf (inside pipe)
TOTAL SLURRY VOLUME					= 195.67 cf
					= 34.8 bbls

Spacer 20.0 bbls Water @ 8.33 ppg

<u>CASING</u>	<u>LEAD SLURRY</u>	<u>TAIL SLURRY</u>	<u>DISPLACEMENT</u>
5 1/2"	450 sacks (50:50) Poz (Fly Ash): Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.003 gps FP-6L + 10% bwoc Bentonite 1,143 Vol. Cu Ft 2.66 Vol. Factor Slurry Weight (ppg) 11.8 Slurry Yield (cf/sack) 2.54 Amount of Mix Water (gps) 14.72; Amount of Mix Fluid (gps) 14.72 <u>Estimated Pumping Time – 70</u> <u>BC (HH:MM)-4:00;</u>	400 sacks (50:50) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride +0.003 gps FP- 6L 540 Vol. Cu Ft 1.84 Vol. Factor Slurry Weight (ppg) 14.2 Slurry Yield (cf/sack) 1.35 Amount of Mix Water (gps) 6.34; Amount of Mix Fluid(gps) 6.34; Estimated Pumping Time – 70 BC (HH:MM)-3:00;	100 bbls 2% Kcl Water @ 8.43 ppg

## 5 1/2" Casing: Volume Calculations:

400 ft	x	0.1926 cf/ft	with 0% excess	=	77.04 cf
2650 ft	x	0.1733 cf/ft	with 159% excess	=	1189 cf
1350 ft	x	0.1733 cf/ft	with 85% excess	=	433.0 cf
40 ft	x	0.1305 cf/ft	with 0% excess	=	5.2 cf (inside pipe)
TOTAL SLURRY VOLUME					= 1704 cf
					= 303 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.

V. A. Proposed Mud Program

<u>DEPTH</u>	<u>MUD PROPERTIES</u>	<u>REMARKS</u>
0 – 400'	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.
400' – 3900'	Weight: 9.0 – 10.4 ppg Viscosity: 32 – 34 sec/qt  pH: NC Filtrate: NC	Drill out from under the surface casing with <del>Brine Water</del> 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.
3900' – TD	Weight: 10.0 – 10.4 ppg Viscosity: 34 – 36 sec/qt  pH: 9-10 Filtrate: 15-20 cm/30 min	From 3,900' 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 dacterial degradation of organic materials. Mix Starch (yellow) to control API filtrate at <15cc-20cc.

FR H2O  
DOWN  
TO TOP  
RUSTLER  
@ 1326'

VI. Proposed Control Equipment:

Will install on the 8 5/8" surface casing a 9" x 3000 psi WP Double Ram BOP and will test before drilling out of surface casing. **As expected pressures will not exceed 2000 psi, we request a waiver of the remote control requirement on the accumulator of the 3M BOP and a variance to run a 2M BOP, if available.** See Exhibit "H" for BOP layout.

VII. Auxiliary Equipment:

9" x 3000 psi double BOP/blind & pipe ram **(2M BOP if available)**  
41/2" x 3000 psi Kelly valve  
9" x 3000 psi mud cross – H<sub>2</sub>S detector on production hole  
Gate-type safety valve 3" choke line from BOP to manifold  
2" adjustable chokes – 3" blowdown line

VIII. A. Testing Program: None planned

B. Logging Program: The following logs may be run:

CNL, LDT, GR, CAL, DLL, MSFL, NGT, Sonic from TD-1300'  
CNL, GR from TD-Surface

C. Coring Program: None planned

D. Mudlogging Program: None planned

IX. 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 1500 psi.

EXHIBIT "B"  
Hawk A # 20

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

No H<sub>2</sub>S is anticipated.

District I  
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State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

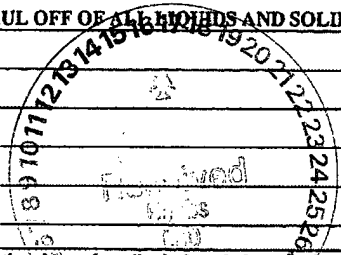
**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒  
Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: <u>Apache Corporation (0873)</u> Telephone: <u>(918)-491-4801</u> e-mail address: <u>terry.gilbert@apachecorp.com</u>		
Address: <u>6120 S. Yale Ave., #1500, Tulsa, OK 74136</u>		
Facility or well name: <u>Hawk A # 20</u> API #: <u>30-025 - 38021</u> U/L or Qtr/Qtr <u>G</u> Sec <u>8</u> T <u>21S</u> R <u>37E</u>		
County: <u>Lea</u> Latitude <u>32° 29' 47.16" N</u> Longitude <u>103° 10' 49.99" W</u> NAD: 1927 <input checked="" type="checkbox"/> 1983 <input type="checkbox"/>		
Surface Owner: Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input checked="" type="checkbox"/> Indian <input type="checkbox"/>		
<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness <u>      </u> mil Clay <input type="checkbox"/> Pit Volume <u>      </u> bbl	<b>Below-grade tank</b> Volume: <u>      </u> bbl Type of fluid: <u>      </u> Construction material: <u>      </u> Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not: <u>      </u>	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet <u>50 feet or more, but less than 100 feet</u> 100 feet or more	(20 points) (10 points) ( 0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes <u>No</u>	(20 points) ( 0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet <u>1000 feet or more</u>	(20 points) (10 points) ( 0 points)
<b>Ranking Score (Total Points)</b>		<b>10 points</b>

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility       . (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface        ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: <u>UTILIZING CLOSED LOOP SYSTEM CONSISTING OF STEEL PITS AND COMPLETE HAUL OFF OF ALL MUDS AND SOLIDS.</u>



I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 6-14-06  
Printed Name/Title: Terry Gilbert Signature: [Signature]

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:  
Printed Name/Title: PETROLEUM ENGINEER Signature: [Signature] Date: JUL 24 2006