NTS-10-743

Form 3160-3
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs
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FORM APPROVED
OMB NO. 1004-0136
Expires: November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: [X] DRILL [ ] REENTER	5. Lease Serial No. NM160973
1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator: Occidental Permian Limited Partnership (157984)	7. Unit or CA Agreement Name and No.
3a. Address: P.O. Box 50250 Midland, TX 79710-0250	3b. Phone No. (include area code): 432-685-5717
4. Location of Well (*Report location clearly and in accordance with any State equirements*)*: At surface 660 FSL 860 FEL SESE(P)	8. Lease Name and Well No. (38407) OPL Zack 8 Federal #1
At proposed prod. zone ~~940 FSL 380 FWL SWSW(M) Bone Spring~~ Per Operator 10-29-10	9. API Well No. 30-025- 39994
	10. Field and Pool, or Exploratory (84241D) Und Salado Draw Wolfcamp Gas
	11. Sec., T., R., M., or Blk. and Survey or Area Sec 8 T26S R33E
14. Distance in miles and direction from nearest town or post office*: 25 miles southwest from Jal, NM	12. County or Parish: Lea; 13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any): 660/380'	16. No. of Acres in lease: 320	17. Spacing Unit dedicated to this well: 320/160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: N/A	19. Proposed Depth: 14500'	20. BLM/BIA Bond No. on file: NM 2797 929128583
21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3289.5'	22. Approximate date work will start*: 11/1/10	23. Estimated duration: 45

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.
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall 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 authorized officer.

25. Signuature: David Stewart	Name (*Printed/Typed*): David Stewart	Date: 8/5/10
Title: Sr. Regulatory Analyst		
Approved by (Signautre): /s/ Don Peterson	Name (*Printed/Typed*)	Date: NOV 29 2010
Title: FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

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

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowlingly 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.

(Instructions on Reverse)

KZ 12/27/10

SEE ATTACHED FOR CONDITIONS OF APPROVAL

CARLSBAD CONTROLLED WATER BASIN

Approval Subject to General Requirements & Special Stipulations Attached

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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-39994	84410	Undesignated Salado Draw Wolfcamp Gas

Property Code	Property Name	Well Number
38407	ZACK FEDERAL 8	1

OGRID No.	Operator Name	Elevation
157984	OCCIDENTAL PERMIAN LIMITED Partnership	3289.5'

Surface Location

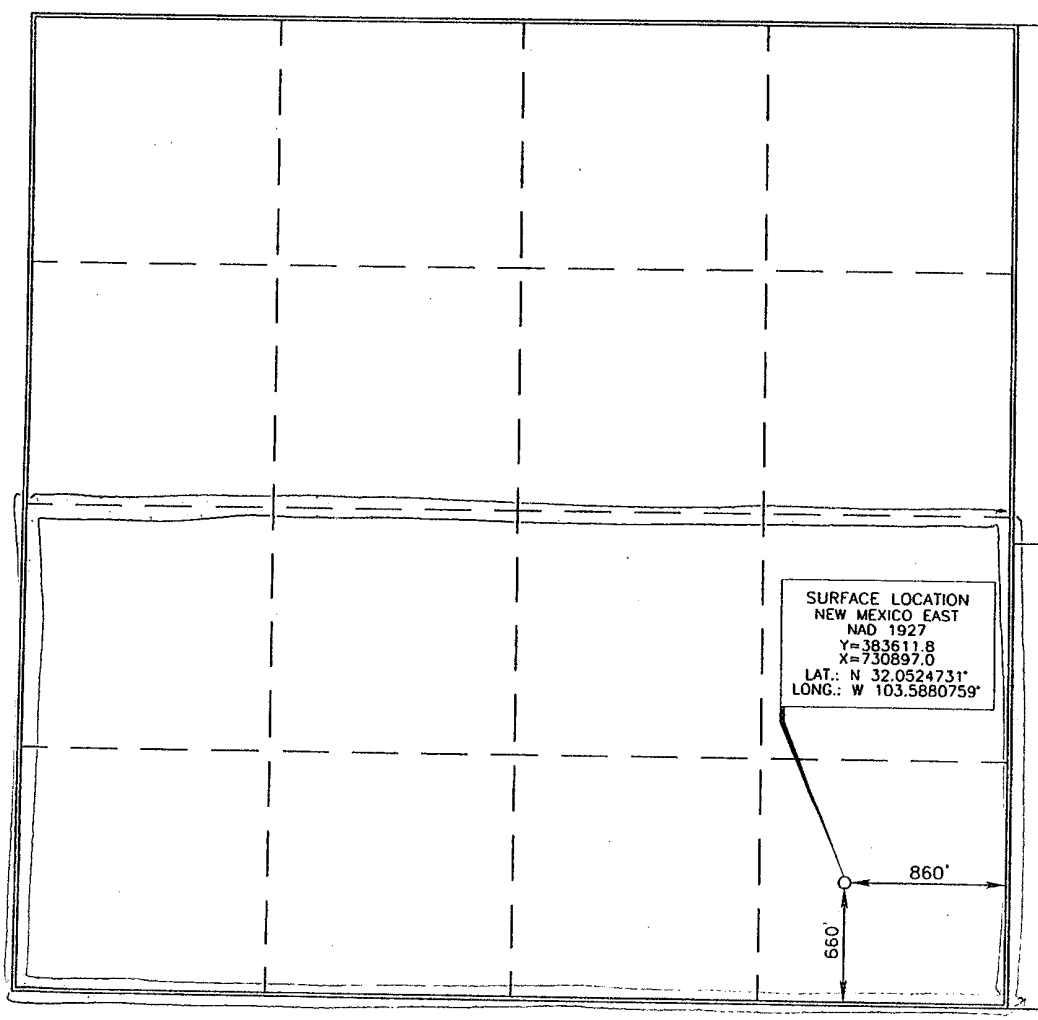
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	8	26 SOUTH	33 EAST, N.M.P.M.		660'	SOUTH	860'	EAST	LEA

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.
320	N		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 8/5/10

David Stewart
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.

JULY 30, 2010
Date of Survey

Signature and Seal of Professional Surveyor

Terry J. Asel 8/5/2010
Certificate Number 15079

WO# 100730WL (Rev. A) (KA)

DRILLING PROGRAM

Operator Name/Number:	Occidental Permian Limited Partnership - 157984
Lease Name/Number:	OPL Zack 8 Federal #1 Federal Lease No. NM160973
Pool Name/Number:	Undsg Salado Draw Wolfcamp Gas-84410 - Wildcat Bone Spring-96053
Surface Location:	660 FSL 860 FEL SESE(P) Sec 8 T26S R33E
Bottom Hole Location:	940 FSL 380 FWL SWSW(M) Sec 8 T26S R33E - Bone Spring

Proposed TD: 14500' TVD 14500' TMD **Elevation:** 3289.5'
SL - Lat: 32.0524731 **Long:** 103.5880759 X=730897.0 Y=383611.8 NAD - 1927
BH - Lat: 32.0532474 **Long:** 103.601144 X=726846.2 Y=383865.8 NAD - 1927

1. Geologic Name of Surface Formation:

a. Permian

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

Geological Marker	Depth	Type
a. Upper Permian Sand	281'	Water
b. Rustler	700'	---
c. Bottom Salt	4793'	---
d. Delaware	4857'	---
e. Bell Canyon	5100'	Oil
f. Cherry Canyon	6400'	Oil
g. Bone Spring	9003'	Oil
h. 3rd Bone Spring	11632'	Oil
i. Wolfcamp	12071'	Gas
j. Strawn	14218'	Gas
k. Atoka	14439'	Gas

3. Casing Program:

See COA

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Condition	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	~~800'~~ 810'	13-3/8"	48#	ST&C	H-40	New	2.86	6.42	8.39
							770#	1730#	
12-1/4"	~~4950'~~ 4850'	9-5/8"	40#	LT&C	J-55	New	1.24	1.9	2.63
			35#	Butt			2570#	3950#	
8-3/4"	14500'	7"	~~29#~~	~~LT&C~~	N-80	New	1.15	1.34	1.6
	DVT @ 8000'		Per Operator 11-8-10		DHW		7020#	8160#	

Collapse and burst loads calculated using Stress Check with anticipated loads

4. Cement Program

a. 13-3/8" Surface — Circulate cement to Surface w/ 530sx PP w/ 4% Bentonite + .125#/sx Poly E Flake + 2% CaCl2, 13.5 ppg 1.75 yield, 165% Excess, 24hrCS-985# followed by 440sx PP w/ 1% CaCl2, 14.8ppg 1.34 yield, 165% Excess, 24CS-2500#

If cement is not circulated, the BLM will be notified, a temperature survey will be run and will be immediately followed by top jobs as necessary to circulate cement to surface.

b. 9-5/8" Intermediate — Circulate cement to surface w/ 1260sx HES light PP w/ 5% salt + .125#/sx Poly E Flake + 5#/sx Gilsonite, 12.4 ppg, 2.12 yield, 100% Excess, 24hrCS-670# followed by 200sx PP w/ 1% CaCl2, 14.8 ppg 1.34 yield, 100% Excess, 24hrCS-1520#

c. 7" Production — 1st stage-Cement w/ 450sx IFH w/ 3% Econolite + .125#/sx Poly-E-Flake + .3% HR-601, 11.9 ppg, 2.54 yield, 200% Excess, 24hrCS-370# followed by 1070sx 50/50 Poz/Prem w/ 2.5#/sx salt + .4% HR-344 + .5% CFR-3 + .125#/sx Poly E Flake + .3% HR-601, 14.4 ppg, 1.26 yield, 200% Excess, 24hrCS-1350#
2nd stage-Cement w/ 400sx IFH w/ 3% Econolite + .125#/sx Poly-E-Flake, 11.9 ppg, 2.53 yield, 200% Excess, 24hrCS-320# followed by 200sx 50/50 Poz/Prem w/ 2.5#/sx salt + .4% HR-344 + .5% CFR-3 + .125#/sx Poly E Flake, 14.4 ppg, 1.26 yield, 200% Excess, 24hrCS-1150#

The above cement volumes could be revised pending the caliper measurement.

5. Pressure Control Equipment:

0-~~800~~ 490' — None

490'~~800~~-14500' — 13-5/8" 10M two ram stack w/ ~~5M~~ annular preventer, 10M Choke Manifold

All BOP's and associated equipment will be tested to ~~1200~~psi with a third party BOP testing service before drilling out the 13-3/8" casing shoe. Prior to drilling out the 9-5/8" casing shoe, the BOP's and Annular preventer will be tested in accordance with On-shore Order #2.

Pipe Rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily driller's log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having a ~~5000~~ psi WP rating.
OXY requests that the entire system be tested as a ~~5000~~psi WP rating.

Request variance to connect BOP choke outlet to the choke manifold a co-flex hose that is manufactured by Contitech Rubber Industrial KFT. It is a 3" ID X 35' flexible hose rated to 10000psi working pressure. It has been tested to 15000psi and is built to API Spec 16C. Once the flex line is installed, it will be tied down with safety clamps, certification attached.

6. Proposed Mud Circulation System

Depth	Mud Wt. ppg	Visc sec	Fluid Loss	Type System
0-~~800~~' 490'	8.4-8.9	32-34	NC	Fresh Water/Ml Gel Spud Mud
~~800~~-~~4950~~ 4450'	9.8-10.0	28-29	NC	Brine Water
~~4950~~-13000'	8.6-9.2	28-29	NC	Fresh Water
13000'-TD	13	32-36	10-15	Duo Vis/Poly Pac R

Pump high viscisity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times.

7. Auxiliary Well Control and Monitoring Equipment:

a. A Kelly cock will be in the drill string at all times.
b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
c. Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached.

8. Logging, Coring and Testing Program: See COA

a. Drill stem tests are not anticipated but if done will be based on geological sample shows.
b. The open hole logging program will consist of GR from Intermediate shoe point to TD.
c. No coring program is planned but if done will be sidewall rotary cores.
d. No mudloggers are currently programmed for this well.

9. Potential Hazards:

No abnormal pressures, temperatures or H_2S gas are expected. The highest anticipated pressure gradient would be .55 psi/ft or 5000 psi. If H_2S is encountered the operator will comply with the provisions of Onshore Oil & Gas Order No.6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

10. Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 45 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

HALLIBURTON

Job Recommendation — Production Casing

Fluid Instructions

Stage 1

Fluid 1: Pump 30 bbl of Water Spacer	Fluid Density:	8.34 lbm/gal
	Fluid Volume:	30 bbl
Fluid 2: Pump 30 bbl of Gel Spacer	Fluid Density:	8.34 lbm/gal
2.5 lbm/bbl WG-19 (Gelling Agent)	Fluid Volume:	30 bbl
Fluid 3: Lead with 450 sks		
Interfill H	Fluid Weight	11.90 lbm/gal
3 % Econolite (Light Weight Additive)	Slurry Yield:	2.54 ft^3/sk
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)	Total Mixing Fluid:	14.73 Gal/sk
0.3 % HR-601 (Retarder)	Top of Fluid:	8000 ft
	Calculated Fill:	3000 ft
	Volume:	203.27 bbl
	Calculated Sacks:	449.68 sks
	Proposed Sacks:	450 sks
Estimated Slurry Properties:	**Thickening Time:**	**06:10**
Compressive Strengths @ 187 °F	**24:00**	**370 psi**
	48:00	**450 psi**
	72:00	**620 psi**
Fluid 4: Tail-in with 1070 sks		
50/50 Poz Premium	Fluid Weight	14.40 lbm/gal
2.5 lbm/sk Salt (Additive Material)	Slurry Yield:	1.26 ft^3/sk
0.4 % Halad(R)-344 (Low Fluid Loss Control)	Total Mixing Fluid:	5.63 Gal/sk
0.5 % CFR-3 (Dispersant)	Top of Fluid:	11000 ft
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)	Calculated Fill:	3500 ft
0.3 % HR-601 (Retarder)	Volume:	240.12 bbl
	Calculated Sacks:	1066.60 sks
	Proposed Sacks:	1070 sks
Estimated Slurry Properties:	**Thickening Time:**	**04:40**
Compressive Strengths @ 187 °F	**24:00**	**1350 psi**
	48:00	**1790 psi**
	72:00	**2340 psi**

DV Tool **8000 ft (MD)**

1st Stage - Proposed TOC @ 8000'

Stage 2

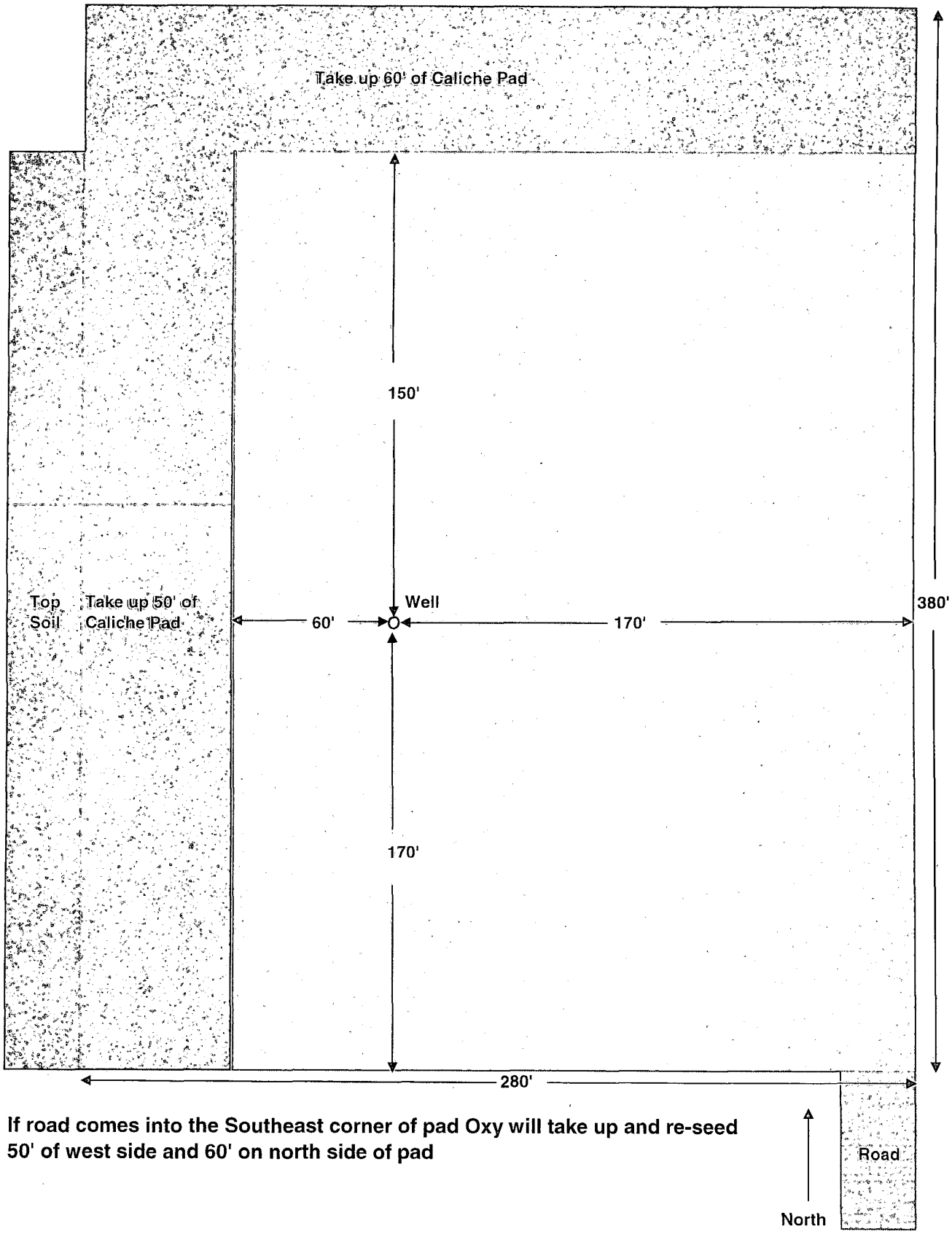
Fluid 1: Pump 30 bbl Water Spacer	Fluid Density:	8.34 lbm/gal
	Fluid Volume:	30 bbl
Fluid 2: Pump 30 bbl Gel Spacer	Fluid Density:	8.33 lbm/gal
2.5 gal/bbl WG-19 (Gelling Agent)	Fluid Volume:	30 bbl
Fluid 3: Lead with 400 sks		
Interfill H	Fluid Weight	11.90 lbm/gal
3 % Econolite (Light Weight Additive)	Slurry Yield:	2.53 ft^3/sk
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)	Total Mixing Fluid:	14.67 Gal/sk
	Top of Fluid:	4500 ft
	Calculated Fill:	2837.59 ft
	Volume:	179.22 bbl
	Calculated Sacks:	397.73 sks
	Proposed Sacks:	400 sks
Estimated Slurry Properties:	**Thickening Time:**	**04:10**
Compressive Strengths @ 140 °F	**24:00**	**320 psi**
	48:00	**430 psi**
	72:00	**600 psi**
Fluid 4: Tail-in with 200 sks		
50/50 Poz Premium	Fluid Weight	14.40 lbm/gal
2.5 lbm/sk Salt (Additive Material)	Slurry Yield:	1.26 ft^3/sk
0.4 % Halad(R)-344 (Low Fluid Loss Control)	Total Mixing Fluid:	5.60 Gal/sk
0.5 % CFR-3 (Dispersant)	Top of Fluid:	7337.59 ft
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)	Calculated Fill:	662.41 ft
	Volume:	44.88 bbl
	Calculated Sacks:	200 sks
	Proposed Sacks:	200 sks
Estimated Slurry Properties:	**Thickening Time:**	**05: 20**
Compressive Strengths @ 140 °F	**24:00**	**1150 psi**
	48:00	**1650 psi**
	72:00	**2180 psi**

These cement volumes are based on field experience in the area and should be recalculated if a caliper log should become available.

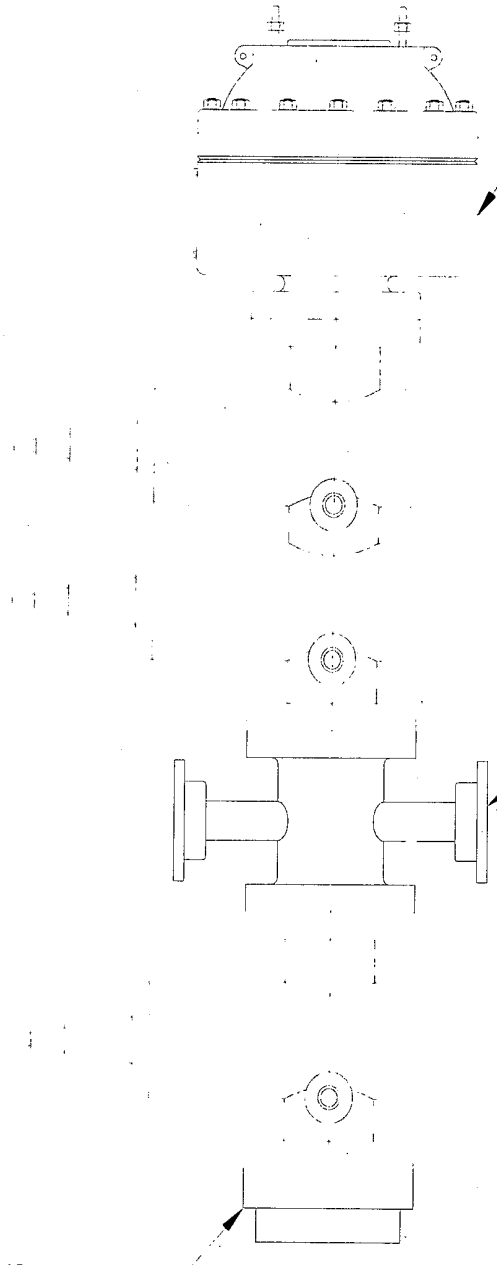
2ND Stage - Propose TOC @ 4500'

OPL Zack 8 Federal #1

660 FSI 860 FEL SESE(P) Sec 8 T26S R33E

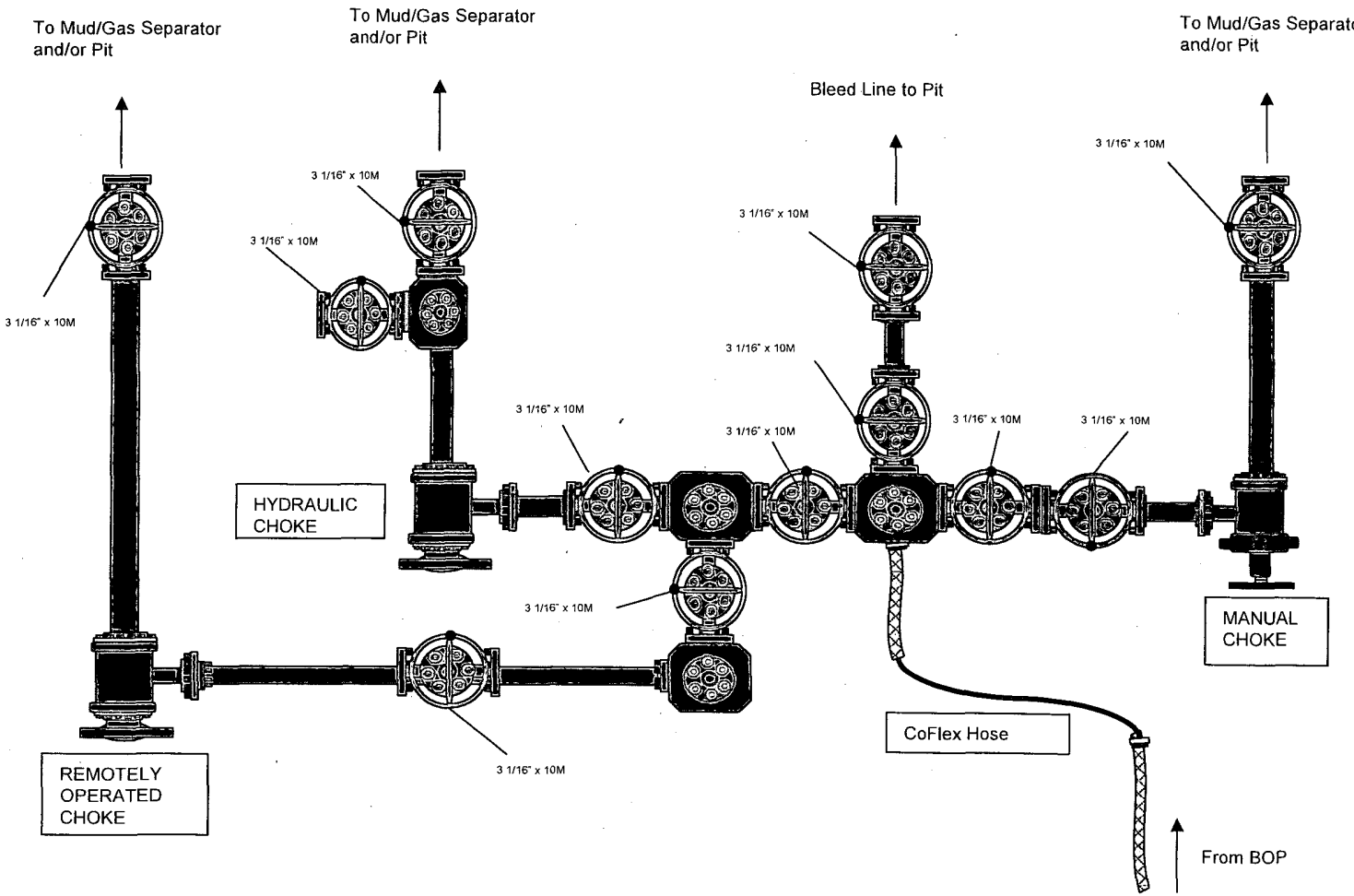


If road comes into the Southeast corner of pad Oxy will take up and re-seed 50' of west side and 60' on north side of pad


ANNULAR SHAFFER PREVENTER 13 5/8" X 10M
13 5/8" – 10M WP CAMERON "U" TYPE DOUBLE RAM PREVENTER.
CAMERON DS SHEARING BLIND RAMS BOTTOM FLANGED AND STUDDED TOP
MUD CROSS WITH 4 1/16" X 10M OUTLET FLANGES 13 5/8" – 10M WP
CAMERON "U" TYPE SINGLE RAM 13 5/8" – 10M WP
FURNISHED 13 5/8"-10M X 11" 10M ADAPTER SPOOL

BOP STACK

10M CHOKE MANIFOLD CONFIGURATION



10M REMOTE

KILL LINE SCHEMATIC