UNITED STATES (reverse side)

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM-22643

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: ---

7. UNIT AGREEMENT NAME: ---

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

597

8. FARM OR LEASE NAME, WELL NO.: <34782> # 1 VALHALLA "4" FEDERAL COM.

2. NAME OF OPERATOR: COG OPERATING, LLC. (ERICK NELSON 432-685-4342) <22937>

9. API WELL NO.: 30-025-37210

3. ADDRESS AND TELEPHONE NO.: 550 WEST TEXAS AVE. SUITE 1300 MIDLAND, TEXAS 79701

10. FIELD AND POOL, OR WILDCAT: Lusk Morrow North

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FNL & 660' FWL SECTION 4 T19S-R32E LEA CO. NM
At proposed prod. zone: SAME Unit D

Capitan Controlled Water Basin

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SECTION 4 T19S-R32E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 40 miles West of Hobbs New Mexico.

12. COUNTY OR PARISH: LEA CO. 13. STATE: NEW MEXICO

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
660'	160	320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
3100'±	13.200'	ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3674' GR.

22. APPROX. DATE WORK WILL START*: WHEN APPROVED

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	Conductor	NA	40'	Cement to surface W/Redi-mix
17½"	H-40 13 3/8"	48	500'	700 Sx. circulate cement
12¼"	J-55,HCK-55 8 5/8"	32	4300'	1000 Sx. " "
7 7/8"	P-110 5½"	17	13,200'	800 Sx. Estimate TOC 7000'

1. Drill 25" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 17½" hole to 500'. Run and set 500' of 13 3/8" 48# H-40 ST&C casing. Cement with 500 Sx. of 35/65 Class "C" POZ + additives, tail in with 200 Sx. of Class "C" cement + 2% CaCl, circulate cement to surface.
3. Drill 12¼" hole to 4300'. Run and set 4300' of 8 5/8" 32# HCK-55 & J-55 ST&C casing. Cement with 800 Sx. of Class "C" 50/50 POZ light cement + additives, tail in with 200 Sx. of Class "C" cement + additives, circulate cement to surface.
4. Drill 7 7/8" hole to 13,200'. Run and set 13,200' of 5½" 17# P-110 LT&C casing. Cement with 800 Sx. of Class "H" Premium Plus cement + additives, estimate top of cement 7000' from surface or 500' above the upper most pay interval.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

COG OPERATING, LLC ACCEPTS THE RESPONSIBILITY OF THE OPERATION OF THIS LEASE.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Joe T Janica TITLE Agent DATE 12/09/04

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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:

APPROVED BY /s/ Joe G. Lara ACTING TITLE FIELD MANAGER DATE APR 25 2005

*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001, makes 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.

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

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	Pool Code	Pool Name
30-025-37210	80800	LUSK MORROW-NORTH

Property Code	Property Name	Well Number
34782	VALHALLA "4" FEDERAL COM	1

OGRID No.	Operator Name	Elevation
229137	COG OPERATING, L.L.C.	3674'

Surface Location

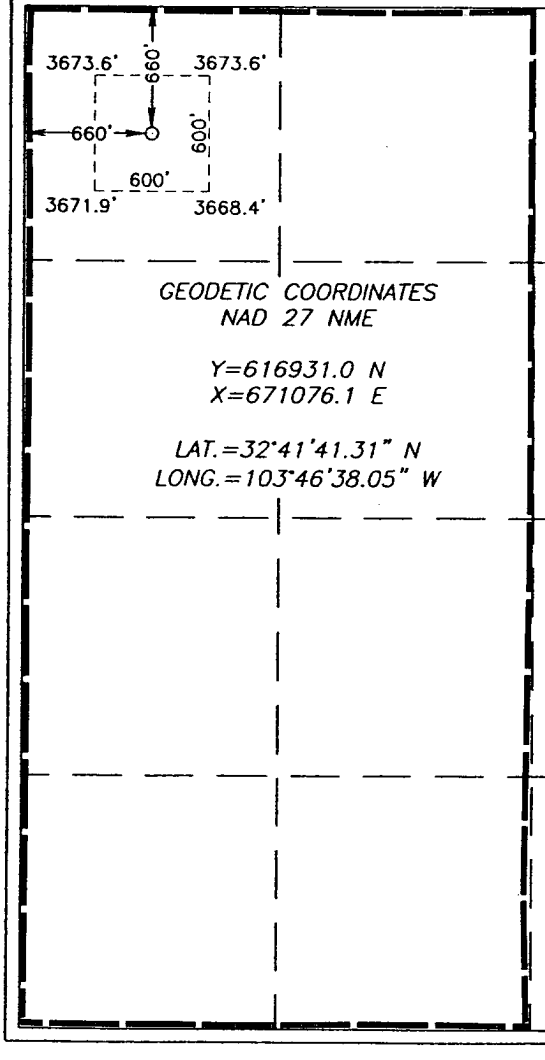
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	4	19-S	32-E		660	NORTH	660	WEST	LEA

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			

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 the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Joe T. Janica
Printed Name

Agent
Title

12/09/04
Date

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 supervison, and that the same is true and correct to the best of my belief.

NOVEMBER 9, 2004
Date Surveyed LA

Signature & Seal of Professional Surveyor

11/11/04

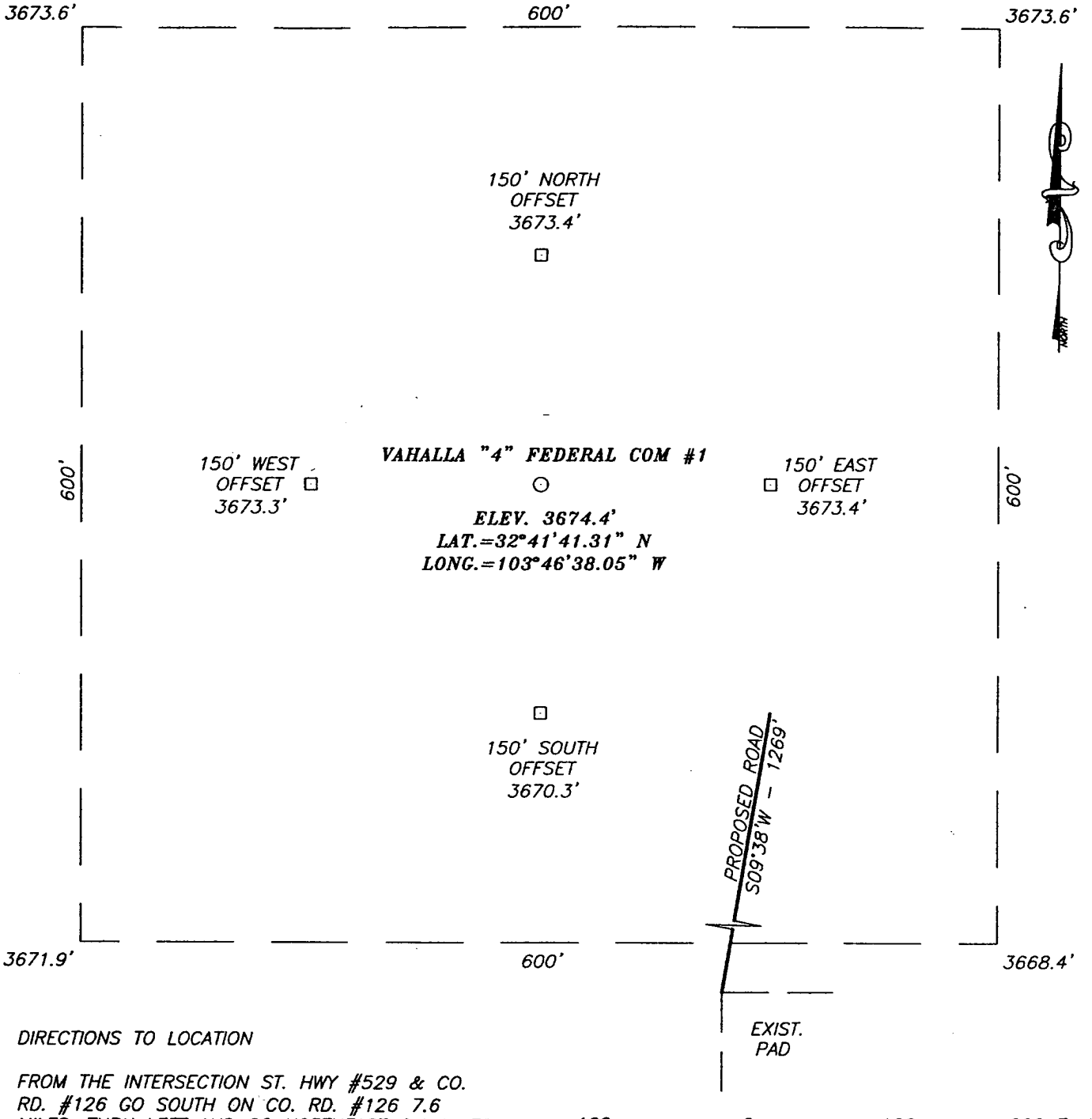
04.11.1477

Certificate No. GARY EIDSON 12641

EXHIBIT "A"

SECTION 4, TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION ST. HWY #529 & CO. RD. #126 GO SOUTH ON CO. RD. #126 7.6 MILES. TURN LEFT AND GO NORTHEAST 0.1 MILES ROAD BENDS RIGHT AND GO EAST 0.8 MILES. TURN LEFT ON LEASE ROAD AND GO NORTH 0.4 MILES. TURN RIGHT AND GO EAST 0.2 MILES TO ABANDONED WELL AND TO PROPOSED ROAD SURVEY AT NORTHWEST CORNER OF PAD. FOLLOW ROAD SURVEY NORTHEAST 1269' TO THIS LOCATION.

100 0 100 200 Feet

Scale:1"=100'

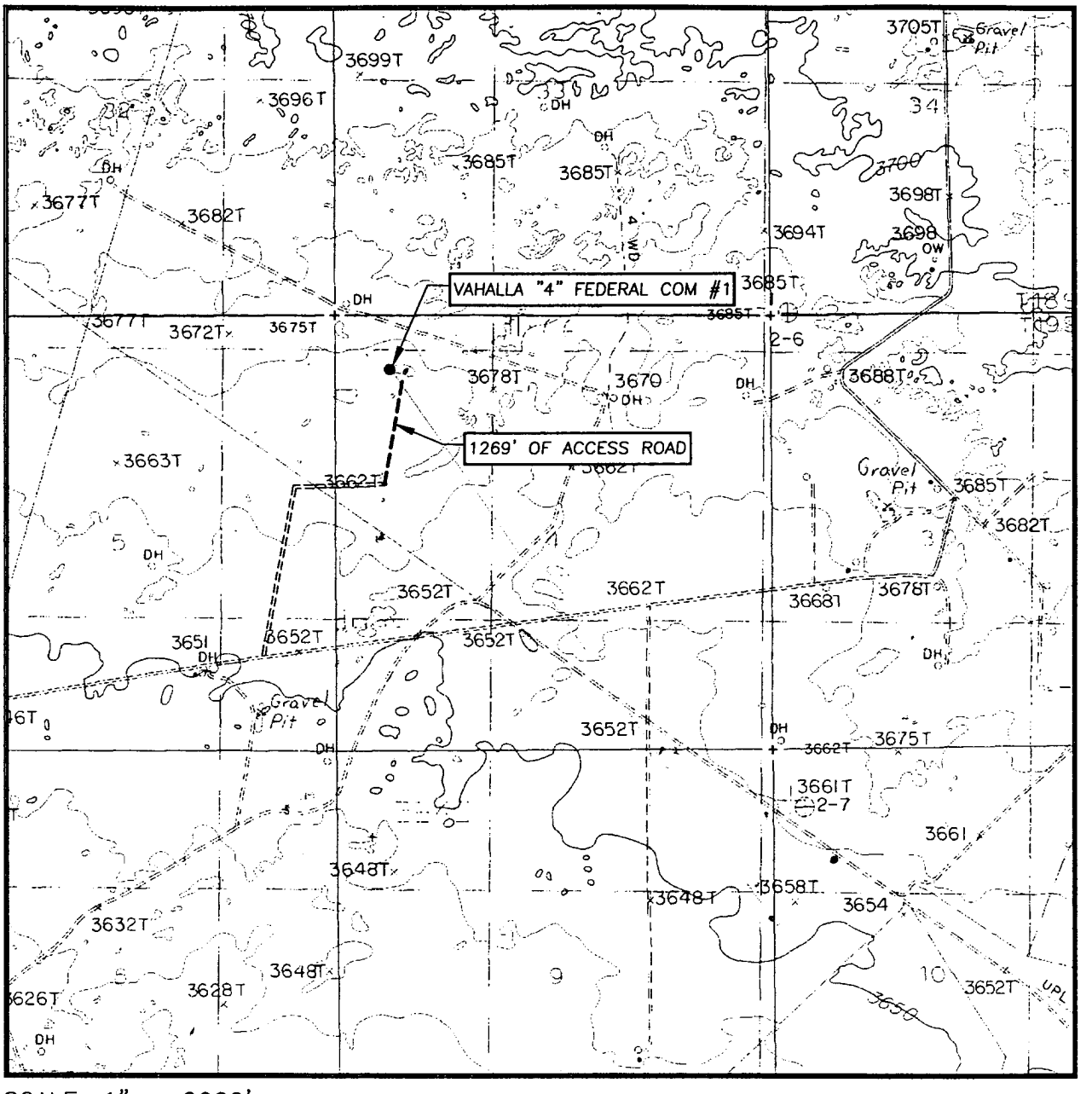
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

COG OPERATING, L.L.C.

VAHALLA "4" FEDERAL COM #1 WELL
LOCATED 660 FEET FROM THE NORTH LINE
AND 660 FEET FROM THE WEST LINE OF SECTION 4,
TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 11/09/04	Sheet 1 of 1 Sheets		
W.O. Number: 04.11.1477	Dr By: LA		Rev 1:N/A
Date: 11/10/04	Disk: CD#3	04111477	Scale:1"=100'

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
GREENWOOD LAKE, N.M. – 10'

SEC. 4 TWP. 19-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 660' FNL & 660' FWL

ELEVATION 3674'

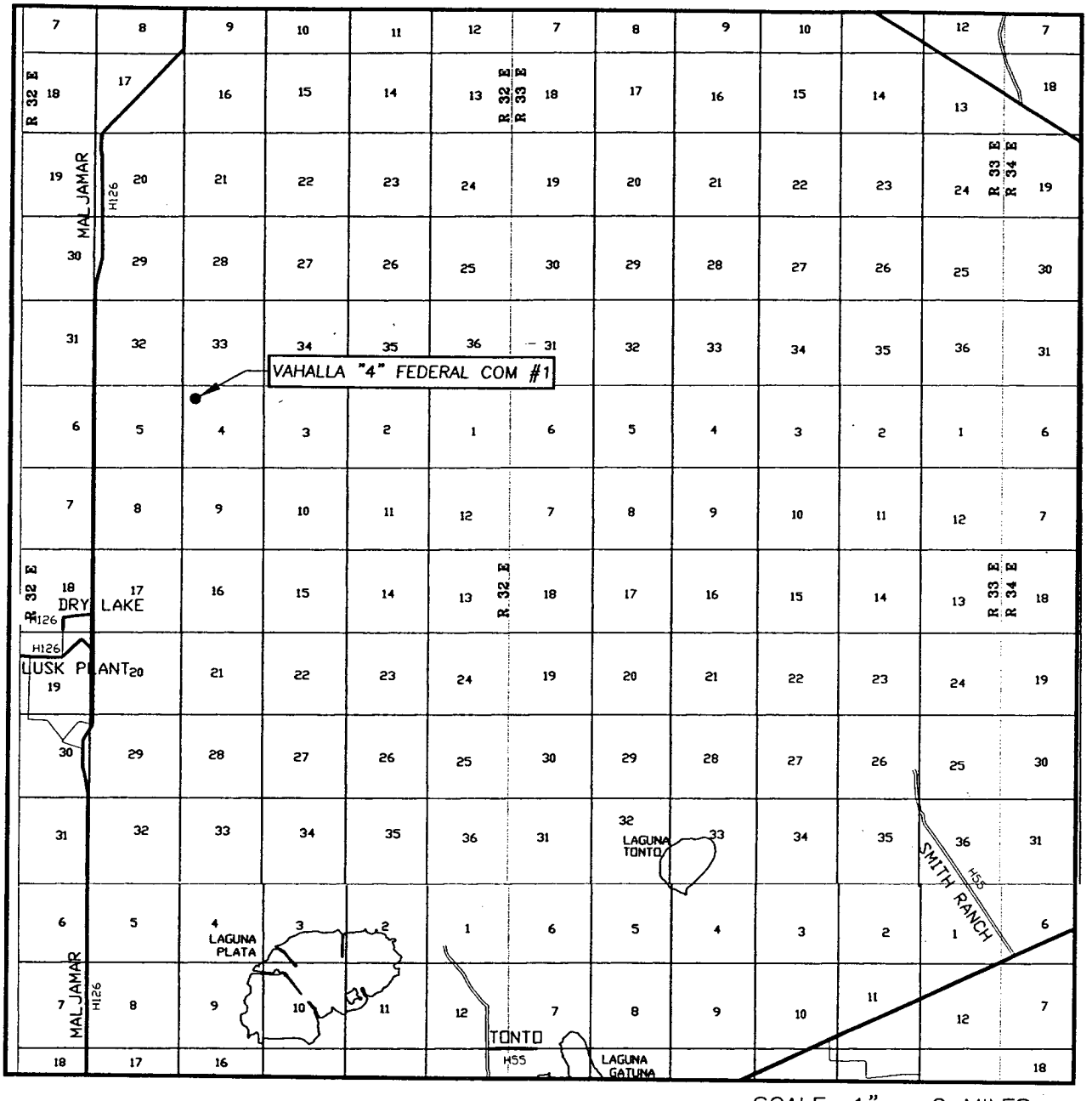
OPERATOR COG OPERATING, L.L.C.

LEASE VAHALLA "4" FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP
GREENWOOD LAKE, N.M.

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

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 4 TWP. 19-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 660' FNL & 660' FWL

ELEVATION 3674'

OPERATOR COG OPERATING, L.L.C.

LEASE VAHALLA "4" FEDERAL COM

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

APPLICATION TO DRILL

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is providedfor your consideration.

1. Location of well: 660' FNL & 660' FWL SECTION 4 T19S-R32E LEA CO. NM

2. Ground Elevation above Sea Level: 3674' GR.

3. Geological age of surface formation: Quaternary Deposits:

4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium to remove solids from hole.

5. Proposed drilling depth: 13,200'

6. Estimated tops of geological markers:

Rustler Anhydrite	1200'	Bone Spring	7120'	Morrow	12200'
Salado Salt	1400'	Wolfcamp	10400'		
San Andres	4580'	Strawn	11500'		
Delaware	5370'	Atoka	11900'		

7. Possible mineral bearing formations:

Bone Spring	Oil
Atoka	Gas
Morrow	Gas

8. Casing Program:

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade
25"	0-40'	20"	NA	NA	NA	Conductor
17½"	0-500'	13 3/8"	48	8-R	ST&C	H-40
12¼"	0-4300'	8 5/8"	32	8-R	ST&C	HCK-55 J-55
7 7/8"	0-13,200'	5½"	17	8-R	LT&C	P-110

APPLICATION TO DRILL

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

9. CASING CEMENTING & SETTING DEPTH:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Set 500' of 13 3/8" 48# H-40 ST&C casing. Cement with 500 Sx. of Class "C" 35/65 POZ + additives, tail in with 200 Sx of Class "C" cement + 2% CaCl, circulate cement to surface.
8 5/8"	Intermediate	Set 4300' of 8 5/8" HCK-55 & J-55 32# ST&C casing. Cement with 800 Sx. of 50/50 Class "C" POZ + additives, tail in with 200 Sx. of Class "C" cement + additives circulate cement to surface
5½"	Production	Set 13,200' of 5½" 17# P-110 LT&C casing. Cement with 800 Sx. of Class "H" Premium Plus cement + additives, estimate top of cement 7000' or at least 500' above the upper most pay interval.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 series 3000 PSI working perssure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nippled up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once each 24 hour period. After the 8 5/8" casing is set at 4300±' a 1500 Series 5000PSI B.O.P. will be installed. This B.O.P. will be tested to API Spec. and will be operated each 24 hour period and blind rams will be operated when the drill pipe is out of hole. Full opening stabbing valve and upper kelly cock will be available in case of need. Exhibit "F" shows a 5000 PSI B.O.P. and Exhibit "F-1 shows a 5000 PSI choke manifold with adjustable choles.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM

SEE ATTACHED PAGE 2-A

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing, viscosity, and water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

Proposed Mud Circulating System

Interval	Mud Wt.	Visc.	FL	Type Mud System
0'- 500'	8.4-9.2	28-35	NC	Fresh water native mud w/ paper for seepage and sweeps. Lime for PH
500'- 1300'	8.4-9.2	28-35	NC	Fresh water native mud w/ paper for seepage and sweeps. Lime for PH, Starch for fluid loss control to protect water sands
1300'- 4300'	10.0- 10.2	28-35	NC	Brine mud, lime for PH and paper for seepage and sweeps.
4300' – 8400'	8.4 – 9.0	NC	NC	Drill section with fresh water/cut brine circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal.
8400' – 10400'	9.0- 9.5	NC	NC	Increase weight with brine additions and utilize periodic sweeps of paper as needed for seepage control and solids removal.
10400' – 11900'	9.5 – 10.0	31-32	<20	Increase weight with brine additions and mud up with starch and XCD polymer circulating through steel pits.
11900' – 13100'	10.0 – 10.1	36-42	<8	Reduce Fluid loss w/ starch and XCD Polymer. Maintain properties to TD. Spot a high vis pill on bottom for logs.

APPLICATION TO DRILL

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

A. Open hole logs: Dual Laterolog, SNP, LDT, Gamma Ray, Caliper from TD back to 8 5/8" casing shoe.

B. Gamma Ray, Neutron from 8 5/8" casing shoe back to surface.

C. Mud logger on hole from 4300' to TD.

D. Cores and DST's taken where sufficient shows are encountered.

13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of H^2S in this area. If H^2S is encountered the operator will comply with the provisions of Onshore Oil and 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. Estimated BHP 7000 PSI, and Estimated BHT 185°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 40 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Morrow formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as a gas well.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:

   A. Characteristics of H_2S
   B. Physical effects and hazzards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2. H_2S Detection and Alarm Systems

   A. H_2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.

3. Windsock and/or wind streamers

   A. Windsock at mudpit area should be high enough to be visible.
   B. Windsock at briefing area should be high enough to be visible.
   C. There should be a windsock at entrance to location.

4. Condition Flags and Signs

   A. Warning sign on access road to location.
   B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H_2S present in dangerous concentration. Only emergency personnel admitted to location.

5. Well control equipment

   A. See exhibit "E" & "E-1"

6. Communication

   A. While working under masks chalkboards will be used for communication.
   B. Hand signals will be used where chalk board is inappropriate.
   C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephoned will be available at most drilling foreman's trailer or living quarters.

7. Drillstem Testing

   A. Exhausts will be watered.
   B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
   C. If the location is near to a dwelling a closed DST will be performed.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

8. Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9. If H_2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H_2S scavengers if necessary.

SURFACE USE PLAN

COG POERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T1009S-R32E LEA CO. NM

1. EXISTING ROADS & PROPOSED ROADS: Area maps; Exhibit "B" is a reproduction of a County General Hi-way Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.

   A. Exhibit "A" shows the proposed well site as staked.

   B. From Hobbs, New Mexico take US Hi-way 62-180 West toward Carlsbad New Mexico go 37± miles to the junction of Hi-way 176 and Co road 243 turn North (Right) follow road 4.6 miles to State road 126 turn North (Right) go 8.1± miles turn East (Right) go .1 mi. bear Right go .8 mi. turn Left on lease road go .4 mi. turn Right go (East) go .2 miles to an abandoned well location turn Northeast go approximately 1300' to location.

   C. Exhibit "C" shows location and roads if well is productive a Sundry report will be issued for pipeline R-O-W.

2. PLANNED ACCESS ROADS: Approximately 1300' of new road will be constructed.

   A. The access roads will be crowned and ditched to a 12' wide travel surface with a 40' Right-of-Way.

   B, Gradient of all roads will be less than 5.00%.

   C. If turn-outs are necessary they will be constructed.

   D. If needed roads will be surfaced with a mimimum of 4" of caliche. This material will be obtained from a local source.

   E. Center-line for new roads will be flagged. Earth-work will be will be done as field conditions require.

   F. Culverts will be placed in the access road if they are necessary. The roads will be constructed to utilaze low water crossings for drainage as required by topography.

3. LOCATIONS OF EXISTING WELLS IN A ONE MILE RADIUS. EXHIBIT "A-1"

   A. Water wells - One approximately 1 mile Southwest of location.

   B. Disposal wells - None known

   C. Drilling wells - None known

   D. Producing wells - As shown on Exhibit "A-1"

   E. Abandoned wells - As shown on Exhibit "A-1"

SURFACE USE PLAN

COG POERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T1009S-R32E LEA CO. NM

4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's. Possible routes of pipelines, flowlines and powerlines are shown on Exhibit "C".

5. LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped to location in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIAL:

If possible construction material will be obtained from the excavation of drill site, if additional material is needed it will be obtained from a local source and transported over the access roads as shown on Exhibit "C".

7. METHODS OF HANDLING WASTE MATERIAL:

A. Drill cuttings will be disposed of in the reserve pits.

B. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.

C. Salts remaining after completion of well will be picked up by the supplier, including broken sacks.

D. Waste water from living quaters will be drained into holes with a minium of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A Porto-John will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.

E. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for furthed drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approve disposal site. Later pips will be broken out to speed drying. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in storage tanks and sold.

8. ANCILLARY FACILITIES:

A. No camps or air strips will be constructed on location.

9. WELL SITE LAYOUT

A. Exhibit "D" shows the proposed well site layout.

B. This exhibit indicated proposed location of reserve and sump pits and living facilities.

C. Mud pits in the active circulating system will be steel pits & the reserve pit is proposed to be unlined unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.

D. If needed, the reserve pit is to be lined with polyethelene. The pit liner will be 6 mils thick. Pit liner will extend a minimum 2'00" over the reserve pits dikes where the liner will be anchored down.

E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10. PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be contoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

11. OTHER INFORMATION:

A. Toprogaphy consists of sand dunes the dip is generally to the West toward the Pecos River. Vegetation consists of native grasses withan occasional mesquite.

B. Surface is owned by the U.S. Department of Interior and is administered by the Bureau of Land Management. The surface is leased to ranchers for grazing of live stock.

C. An archaeological survey will be conducted and the results will be filed with The Bureau of Land Management Carlsbad Field office in Carlsbad NM. If this is required by the Bureau of Land Management since this is an old existing location.

D. There are no domestic dwellings located within one mile of the location.

12. OPERATORS REPRESENTIVE:

Before construction:

TIERRA EXPLORATION, INC.
P.O. BOX 2188
HOBBS, NEW MEXICO 88241
JOE T. JANICA
OFFICE PHONE 505-391-8503

During and after construction:

COG OPERATING, LLC.
550 WEST TEXAS AVE
SUITE 1300
MIDLAND, TEXAS 79701
ERICK NELSON PHONE 432-685-4342

13. CERTIFICATION: I hereby certify that I or persons under my direct supervision have inspected the proposed drill site and access route, that I am familiar with the conditions which currently exist, that the statements made in this plan are to the best of my knowledge, are true and correct, and that the work associated with the operations proposed herein will be performed by COG OPERATING, LLC. .. it's contractors/subcontractors is in the conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME : Joe T. Janica

DATE : 12/09/04

TITLE : Agent

EXHIBIT "A-1"
ONE MILE RADIUS MAP

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

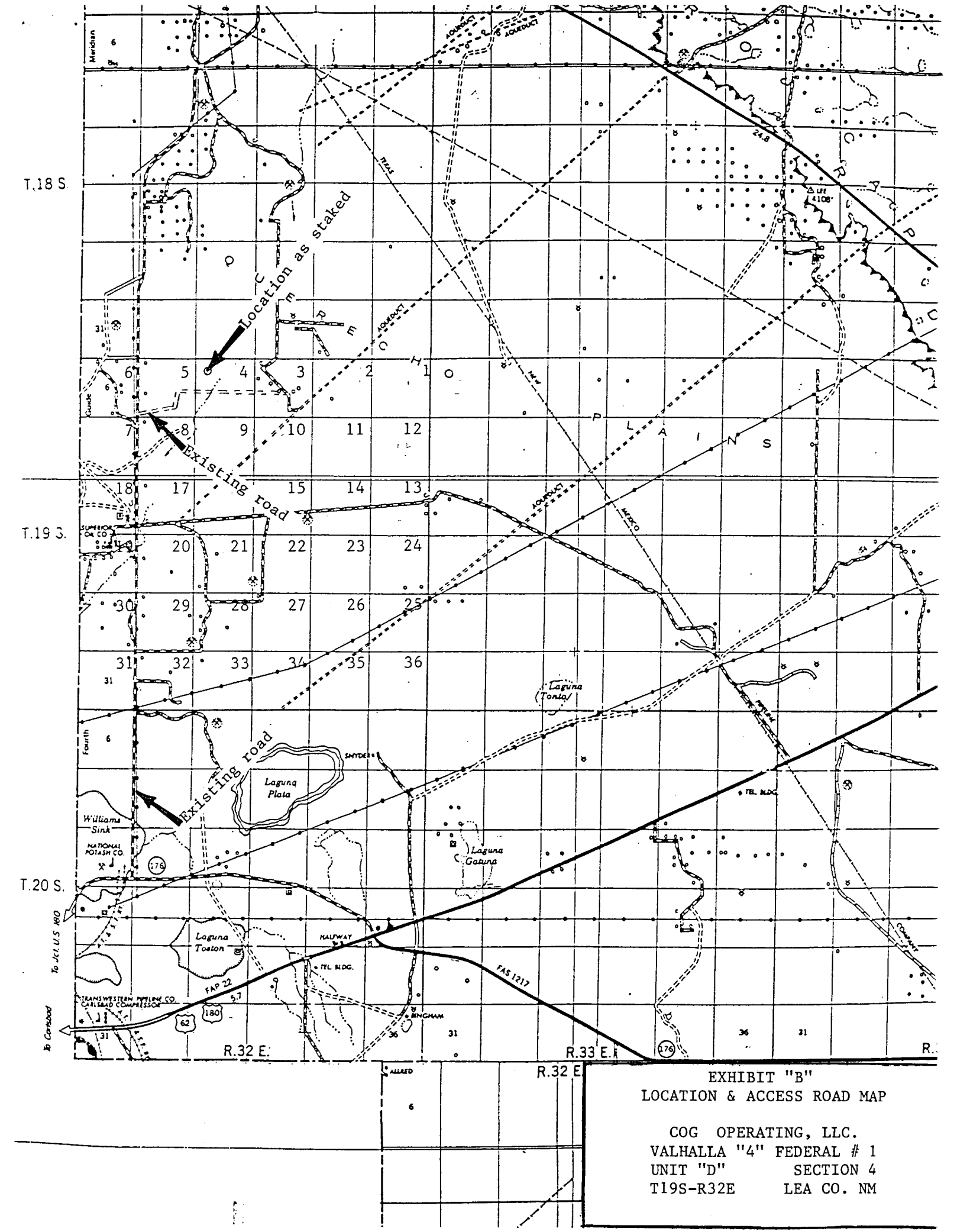


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

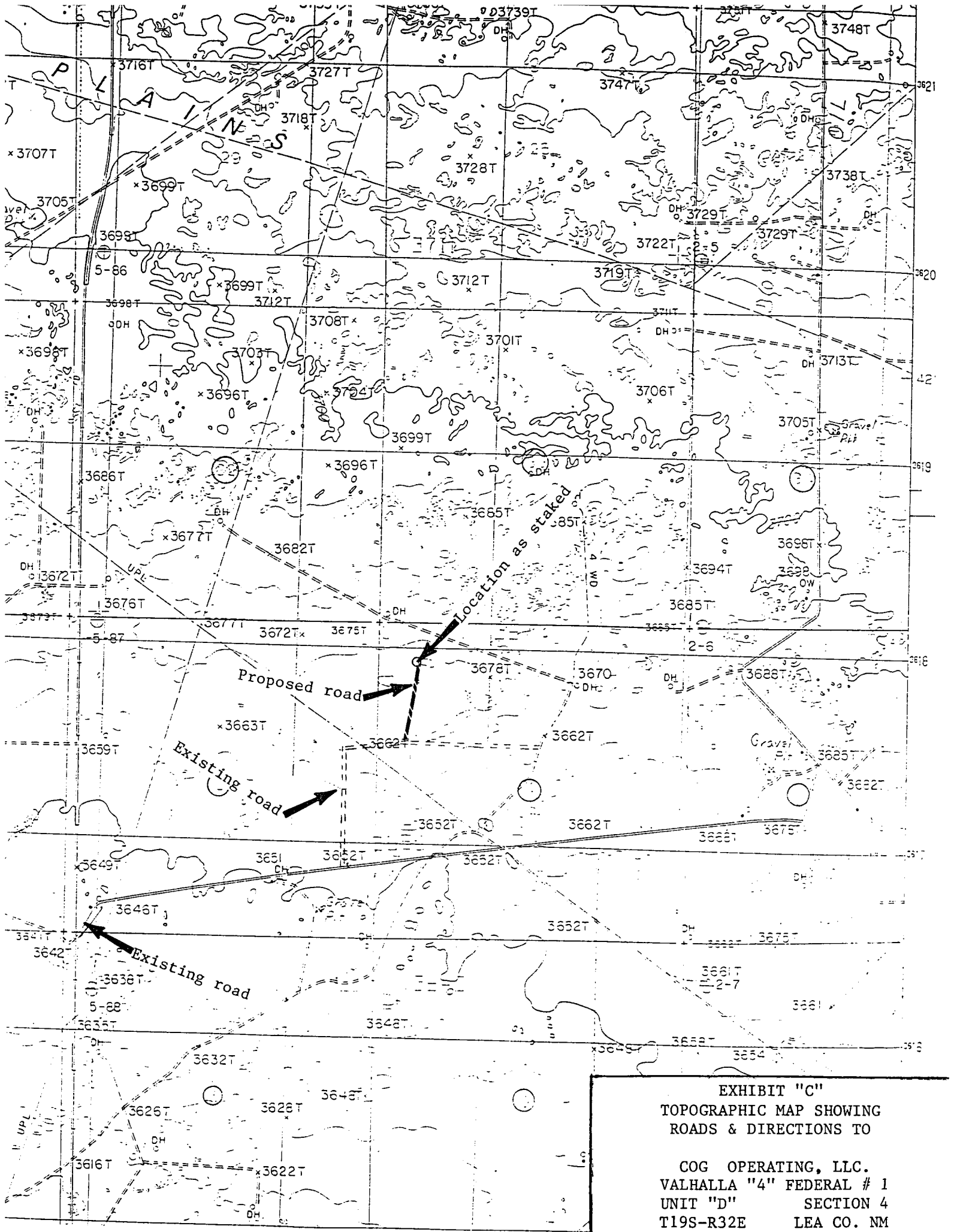
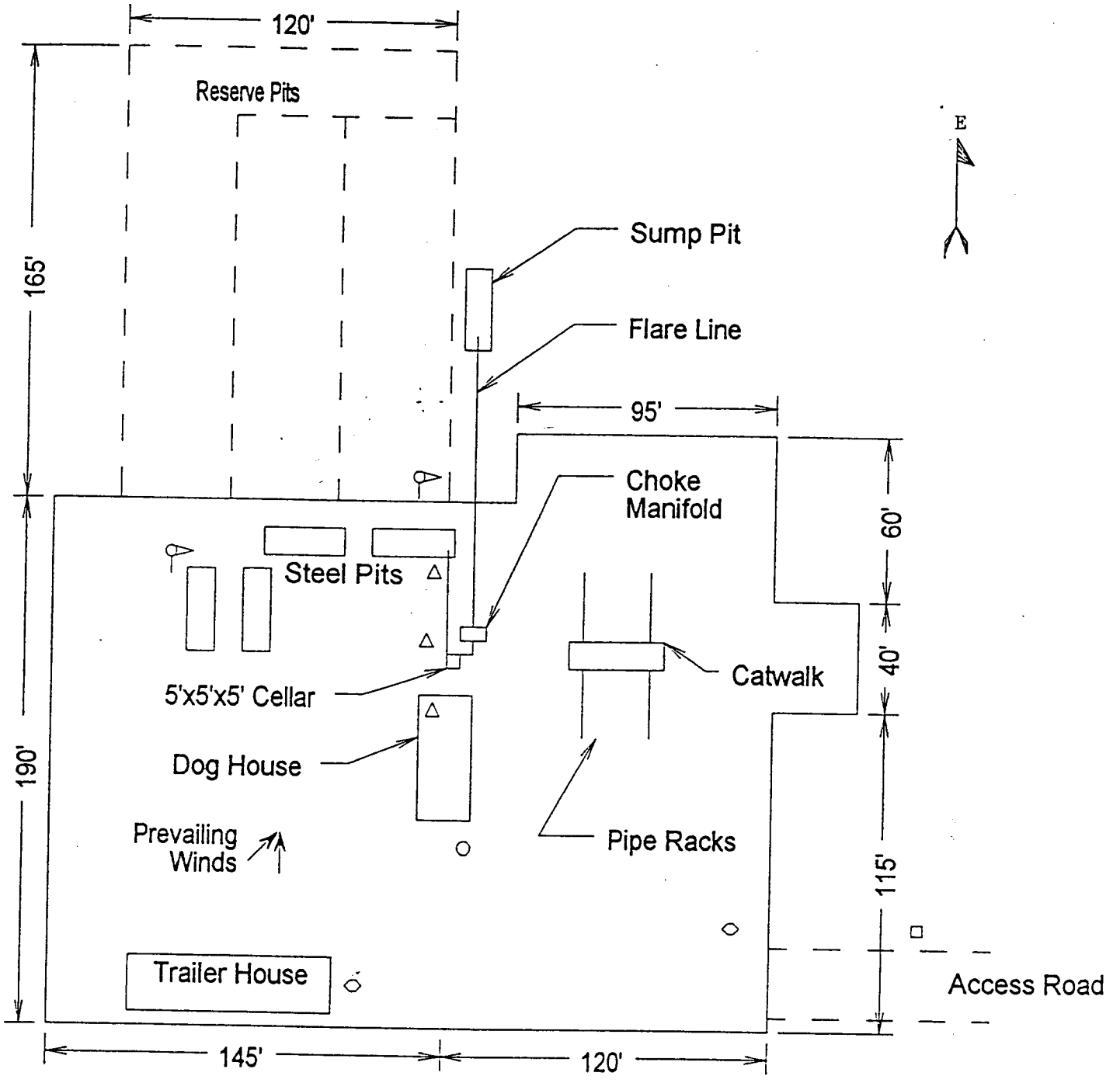


EXHIBIT "C"
TOPOGRAPHIC MAP SHOWING
ROADS & DIRECTIONS TO

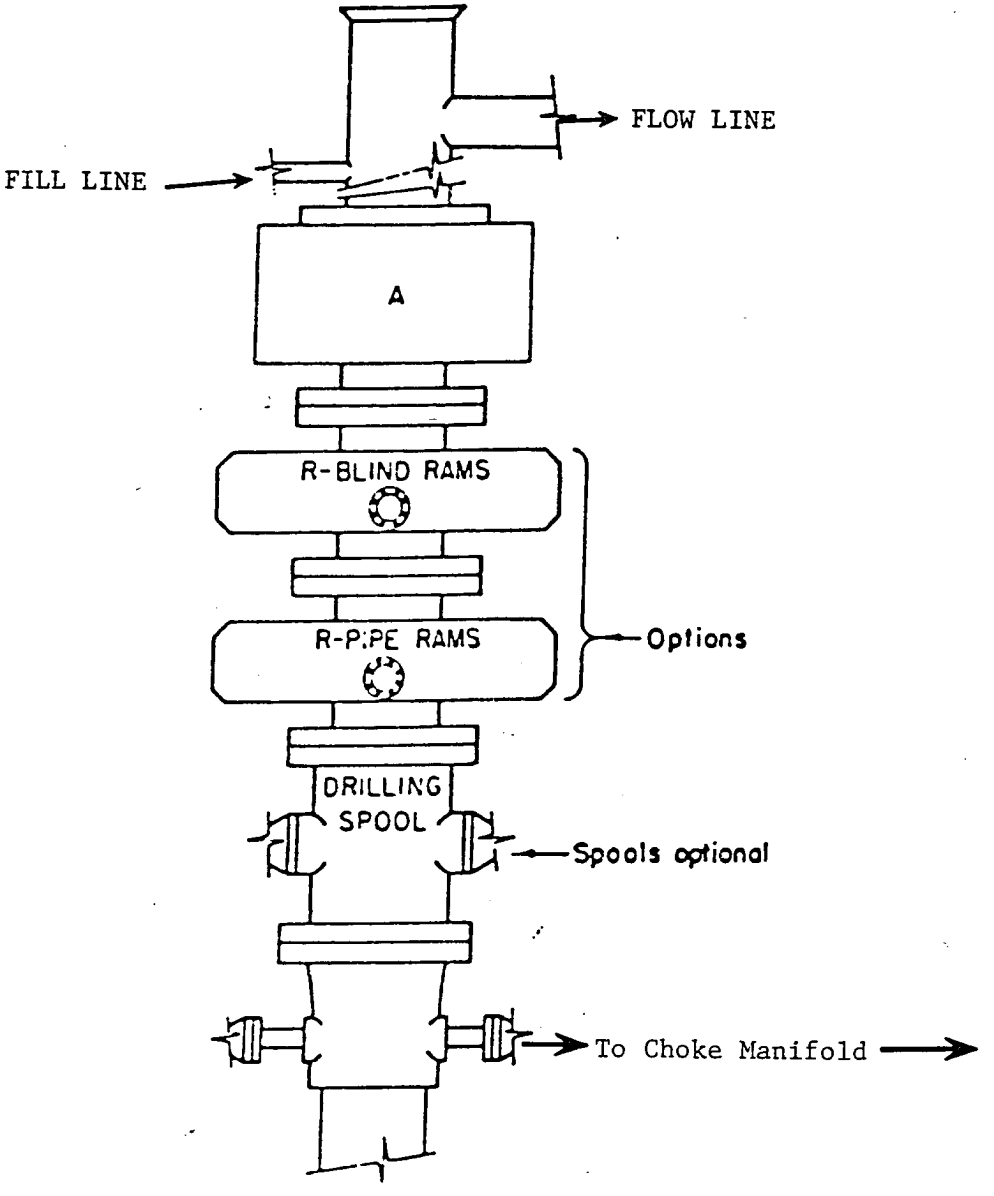
COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM



- Wind Direction Indicators (wind sock or streamers)
- △ H2S Monitors (alarms at bell nipple and shale shaker)
- ◇ Briefing Areas
- ○ Remote BOP Closing Unit
- □ Sign and Condition Flags

EXHIBIT "D"
RIG LAY OUT PLAT

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

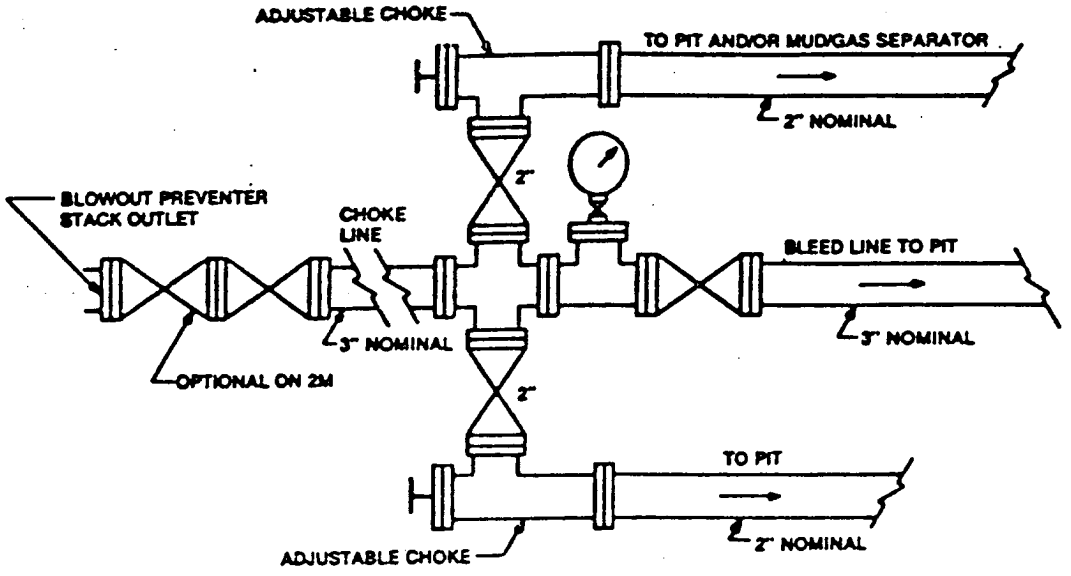


ARRANGEMENT SRRA

900 Series
3000 PSI WP

EXHIBIT "E"
SKETCH OF B.O.P. TO BE USED ON

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA COL NM



Typical choke manifold assembly for 3M WP system

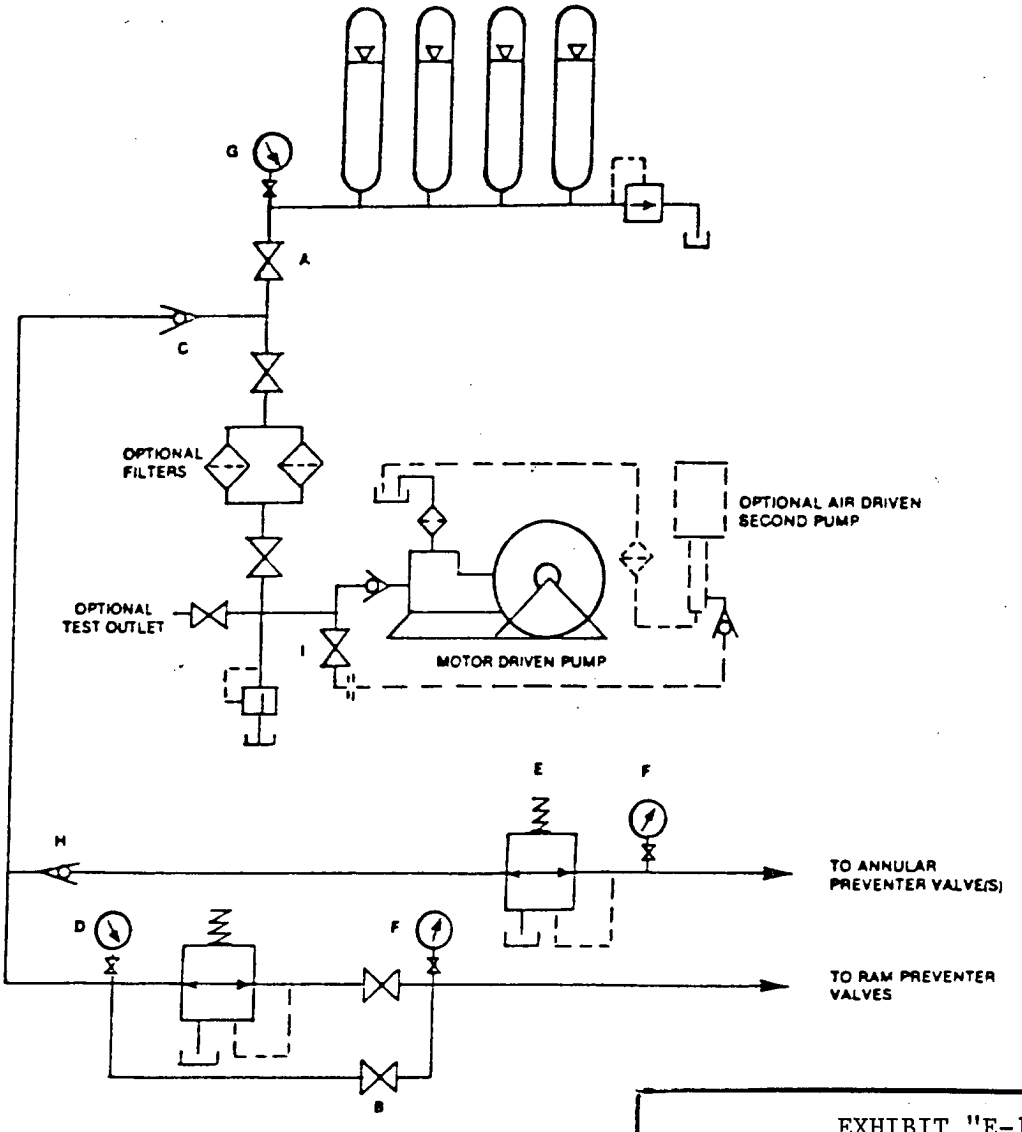
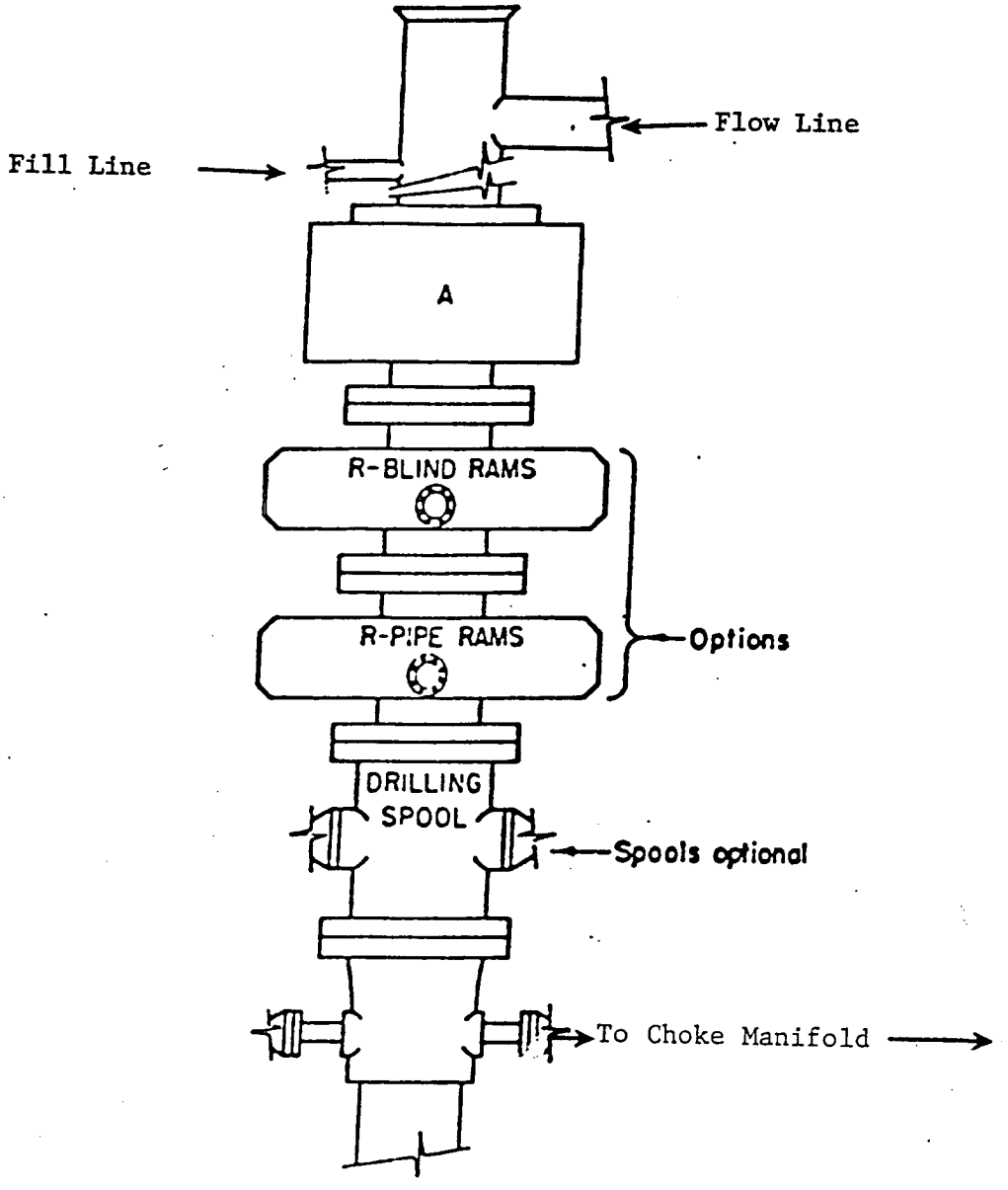


EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM



ARRANGEMENT SRRA

1500 Series

5000# Working Pressure

EXHIBIT "F"
SKETCH OF B.O.P. TO BE USED ON

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

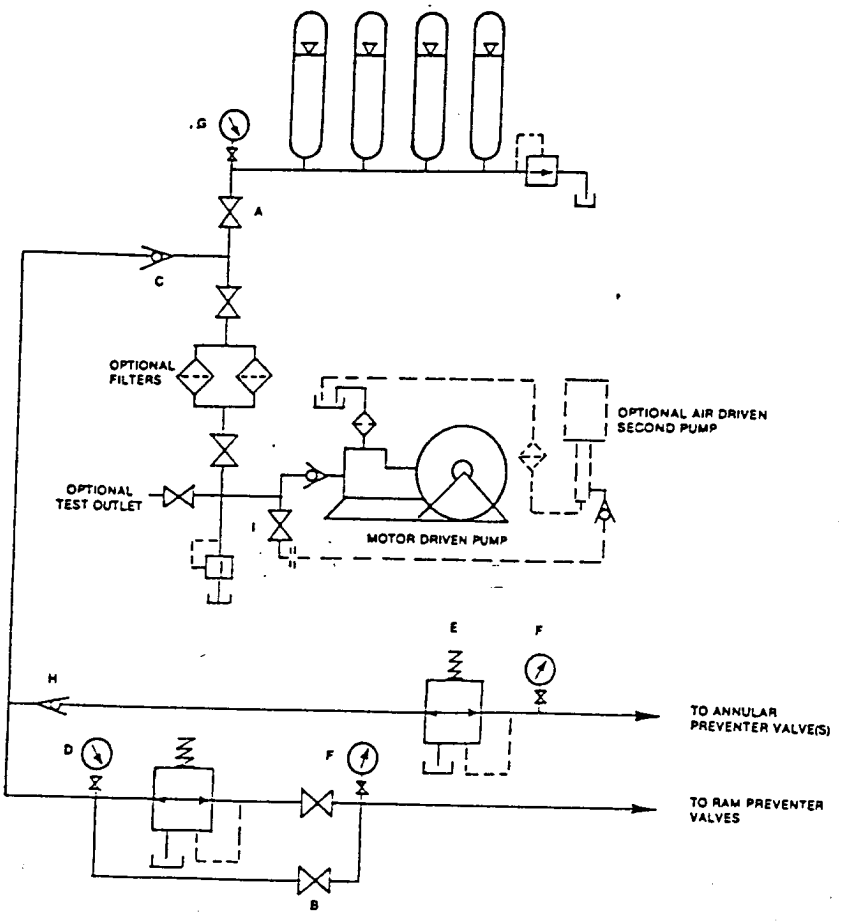


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

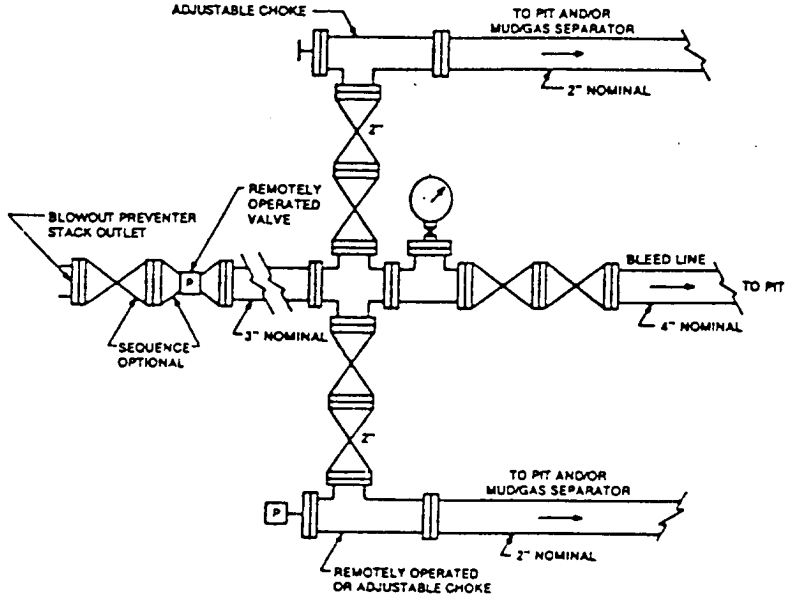


FIGURE K4-2. Typical choke manifold assembly for 5M rated working pressure service — surface installation.

EXHIBIT "F-1"
CHOKE MANIFOLD & CLOSING UNIT

COG OPERATING, LLC.
VALHALLA "4" FEDERAL # 1
UNIT "D" SECTION 4
T19S-R32E LEA CO. NM

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-144
March 12, 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: COG OPERATING, LLC. Telephone: 432-685-4342 e-mail address:
Address: 550 WEST TEXAS AVENUE SUITE 1300 MIDLAND, TEXAS 79701
Facility or well name: VALHALLA "4" FED. COM API #: 30-025-37210 U/L or Qtr/Qtr D Sec 4 T 19S R 32E
County: LEA Latitude 32°41'41" Longitude 103°46'38" NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit	Below-grade tank		
Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☐ Thickness 12 mil Clay ☐ Volume 15M bbl	Volume: ____bbl Type of fluid: Construction material: Double-walled, with leak detection? Yes ☐ If not, explain why not.		
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) 200'	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	0	(20 points) (10 points) (0 points) 0
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	0	(20 points) (0 points) 0
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 1000 feet or more	0	(20 points) (10 points) (0 points) 0
	Ranking Score (Total Points)	0	0

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: 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.

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: 04/27/05
Printed Name/Title Joe T. Janica/ Agent Signature Joe T Janica

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:
Date: APR 28 2005
Printed Name/Title PETROLEUM ENGINEER Signature