OCD-ARTESIA

ATS-10-735

Form 3160-3
(August 2007)

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010 EA 1074

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NM 11042

6. If Indian, Allotee or Tribe Name

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

1a. Type of work: ☑ DRILL ☐ REENTER

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

8. Lease Name and Well No. (11808)
ROSS DRAW ~~#32~~ UNIT #32

2. Name of Operator J.C. WILLIAMSON (11158)

9. API Well No.
30-015-38273

3a. Address 214 WEST TEXAS, SUITE 1250
MIDLAND, TEXAS 79701

3b. Phone No. *(include area code)*
(432) 682-1797

10. Field and Pool, or Exploratory
ROSS DRAW - DELAWARE, EAST (52795)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 660 FEL 1980 FSL (U/L I)
At proposed prod. zone 660 FEL 1980 FSL

11. Sec., T. R. M. or Blk. and Survey or Area
27 T26S R30E

14. Distance in miles and direction from nearest town or post office*
18 Miles from Loving, New Mexico

12. County or Parish
EDDY

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
1980	789.91	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**
1980	7000'	NM 2469
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
GL 3010	10/01/2010	30 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
Regal E Williamson	RALPH E. WILLIAMSON	7/19/2010

Title
CHIEF PROJECT ENGINEER AND AGENT for J.C. Williamson

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson		SEP 30 2010
Title	**Office**	
FIELD MANAGER	**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)

Carlsbad Controlled Water Basin

RECEIVED
OCT 05 2010
NMOCD ARTESIA

Approval Subject to General Requirements & Special Stipulations Attached
KZ 11/16/10

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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 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
30-015-	52795	~~DELAWARE~~ ROSS DRAW; DELAWARE, EAST

Property Code	Property Name	Well Number
11808	ROSS DRAW	32

OGRID No.	Operator Name	Elevation
11158	J.C. WILLIAMSON	3010'

Surface Location

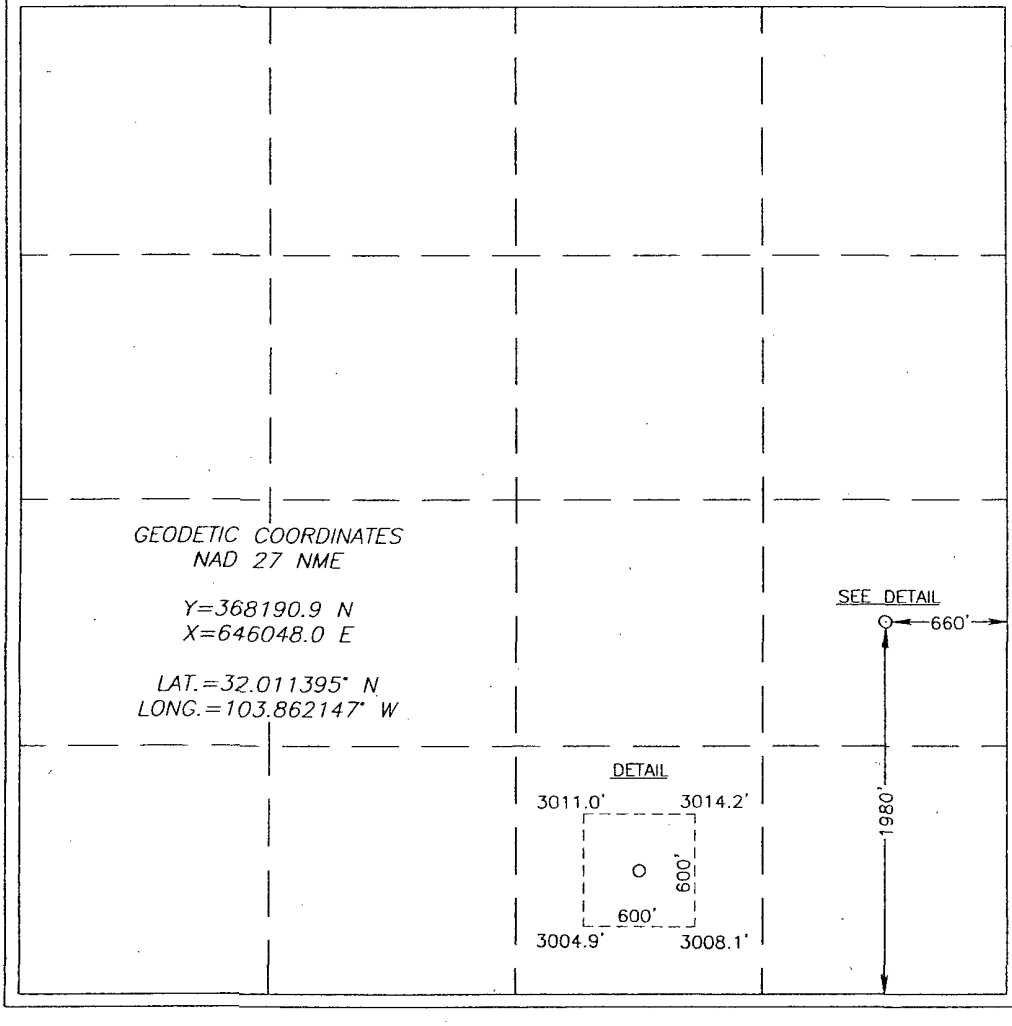
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	27	26-S	30-E		1980	SOUTH	660	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

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 7/29/10 Date

Printed Name agent for JC Williamson

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
NEW MEXICO
JULY 14, 2008
3239
REGISTERED PROFESSIONAL SURVEYORS

Date Surveyed 07/14/2008

Signature & Seal of Professional Surveyor

Ronald J. Eidson 07/27/2010

10.13.0133

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Roswell Field Office

2909 West 2nd St.

Roswell, New Mexico 88202

Statement Accepting Responsibility for Operations

Operator Name: J.C. Williamson

Street or box: 214 West Texas Street, Suite 1250

City, State: Midland, TX 79701

The undersigned, as agent for the operator, J.C. Williamson, accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No.: 11042

Legal Description of Land:
Lease comprises the S/2 of Section 27, the NW/4 and the SE/4 of Section 26, and the N/2 of NW/4, and lots 3, 4, Section 35, T26S, R30E, Eddy County, New Mexico

Formations (if applicable): Not applicable

Bond Coverage: State of New Mexico Bond will be obtained if required.
J.C. Williamson is individually bonded.

BLM Bond File No.: NM2469

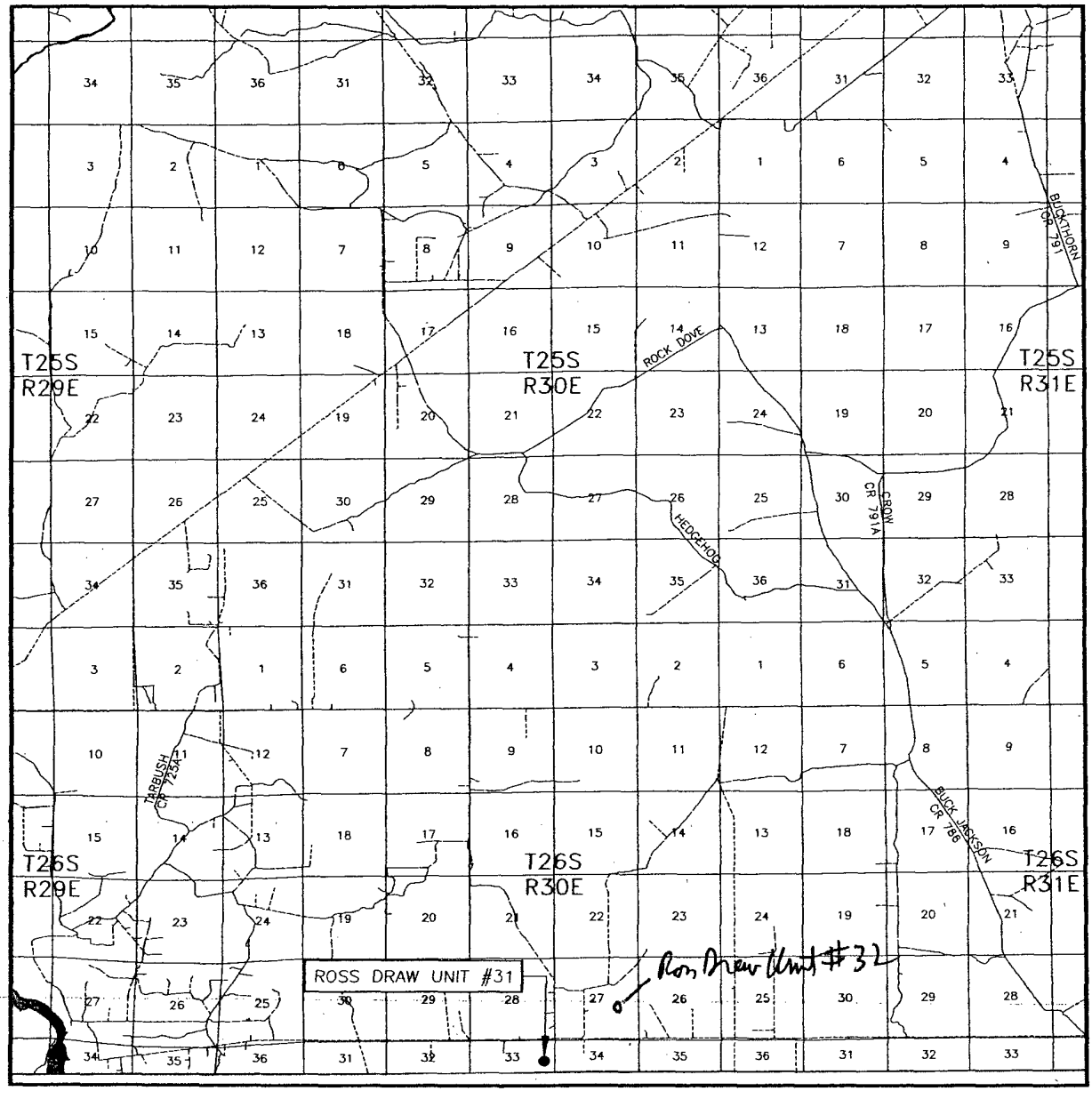
Authorized Signature: Ralph E. Williamson

Printed Name: Ralph E. Williamson

Title: Chief Project Engineer and Agent

Date: 7/29/10

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 33 TWP. 26-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 687' FSL & 660' FEL

ELEVATION 2979'

OPERATOR J.C. WILLIAMSON

LEASE ROSS DRAW UNIT

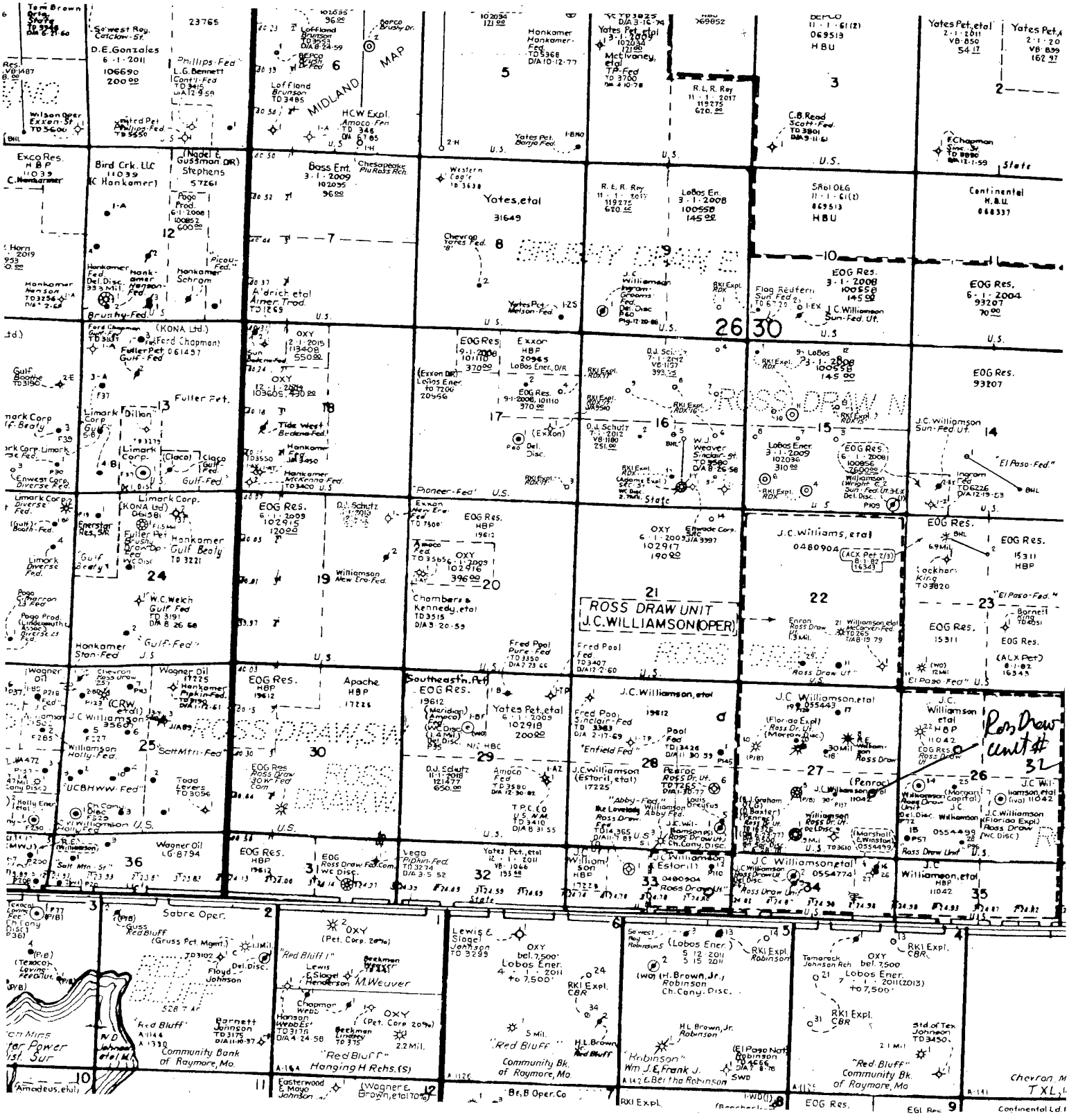
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

J.C. Williamson

Ross Draw Unit #32

Vicinity Map

Exhibit "B"

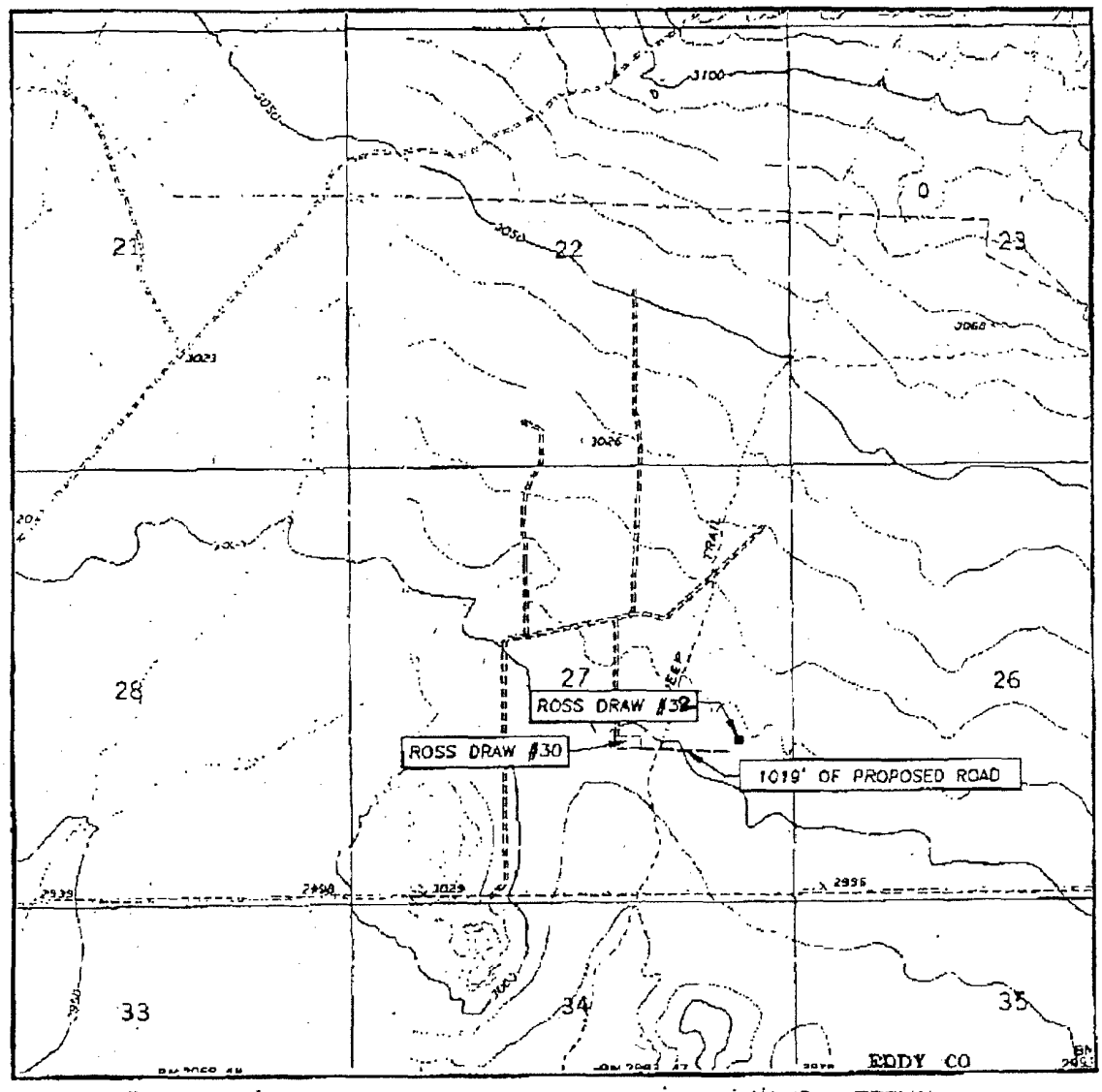


J.C. Williamson

Ross Draw Unit #32

Exhibit "B-1"

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
PHANTOM BANKS, N.M. – 10'

SEC. 27 TWP. 26-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1980' FSL & 660' FEL

ELEVATION 3010'

OPERATOR J.C. WILLIAMSON

LEASE ROSS DRAW

U.S.G.S. TOPOGRAPHIC MAP
PHANTOM BANKS, N.M.

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

J.C. Williamson

Ross Draw Unit #32

Topographic Map

Exhibit "C"

APPLICATION FOR DRILLING
J.C. WILLIAMSON
ROSS DRAW Unit #32

660 FEL, 1980 FSL, SEC 27, T26S, R30E
Eddy County, New Mexico
Lease No. NM-11042

DRILLING PROGRAM

1. Geologic Name of Surface Formation
   a. Quarternary Alluvium

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

a.	Surface Alluvium	0'-400'	Fresh water
b.	Rustler Anhydrate	400'	Impervious
c.	Upper Salt - Salt Stingers	550'	Impervious
d.	Upper Salt	1100'	Impervious
e.	Bell Canyon Sand	3460'	Oil and Associated Gas
f.	Cherry Canyon Sand	4400'	Oil and Associated Gas
g.	Brushy Canyon Sand	5700'	Oil and Associated Gas
h.	Castle Sand	6900'	Oil and Associated Gas

The surface fresh water sands down to 400' will be protected by setting 13-3/8" casing set at 500' and with cement circulated back to the surface. No other formations are expected to yield oil or gas in measurable volumes in this well, except these zones listed above. Some other zones productive of oil and gas may be encountered during drilling this well. Any productive Delaware Sand intervals will be isolated by setting 5-1/2" casing to the total depth and cement circulated to above the base of the 8-5/8" casing, using a two-stage cementing procedure.

3. Casing Program:

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	0'-500'	13-3/8"	48#	ST&C	H-40	1.97	3.70	9.01J
11"	500' - 3400'	8-5/8" 2300' 1100'	24# 32#	ST&C ST&C	K-55 K-55	1.18 1.52	1.73 2.20	3.44J 5.00J
7-7/8"	3400' - 7000'	5-1/2"	15.5#	LT&C	K-55	1.12	1.31	1.89J

4. Cement Program:

   a. 13-3/8" Surface Casing — Cement mixed is to be 750 sx 65/35 Poz C, with 2% CaCl, ¼ # Celloflake, 6% Bentonite/sx, mixed at 12.8 ppg yielding 1.72 cubic feet per sx, followed by

500 sx C, with 2% CaCl, ¼ # Celloflake/sx, mixed at 14.8 ppg wt, yielding 1.32 cubic feet per sx. Top of Cement is to be at surface.

b. 8-5/8" Intermediate — Cement mixed is to be: 1000 sx 65/35 Poz C, with 2% NaCl, ¼ # Celloflake, 6% Bentonite/sx, mixed at 12.8 ppg weight, yielding 1.72 cubic feet per sx, followed by 500 sx "C" cement, with 2% NaCl, ¼ # Celloflake/sx, mixed at 14.8 ppg yielding 1.32 cubic feet/sx. TOC surface per operator 3/16/20 RGH

c. 5-1/2" Production — Cement mixed is to be: 1st stage Cement is to be 1000 sx 65/35 Poz cement, with 6# NaCl, ¼# Celloflake/sx mixed at 14.8 ppg wt, yielding 1.32 ppg/sx; a deviation tool to be placed in the 5-1/2" string of casing below the surface of the ground at 4500'; 2nd stage cement is to be 1000 sx 65/35 Poz, with 2% NaCl, ¼ # Celloflake/sx mixed @ 14.8 ppg, yielding 1.32 cubic feet/sx. The estimated top of cement is to be at 2900 feet from surface, 500 feet above the casing shoe of the 8-5/8" casing that was previously set in the hole.

See COA

The above cement volumes may be revised depending on hole size estimates or caliper measurements taken from the open hole logs. All casing will be new API approved steel pipe, or used steel pipe visually inspected and drifted and tested to 100% of new burst strength specifications.

5. Pressure Control Equipment

The blowout preventor (BOP) equipment will consist of a 3000# system working pressure double ram type blowout preventor with the appropriate pipe ram sizes in blowout preventor at all times and with blind rams in the blowout preventor. (See Exhibit E). The unit will be hydraulically operated and the ram type preventor will be equipped with blind rams on bottom and 4-1/2" drill pipe rams on top. The blowout preventor will be installed on the 13-3/8" surface casing during the drilling operation until 5-1/2" is set and cemented. The BOB will be utilized continuously. All BOP and associated equipment will be tested ~~to 1000 psi with the rig pump~~ before drilling out the 13-3/8" casing shoe ~~(80% of 48#, H-40 casing burst pressure rating).~~ Prior to drilling out the 8-5/8" casing shoe, the BOP's will be tested as per BLM Drilling Operations Order #2.

See COA

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is removed from the hole. These operational 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 3000 psi WP rating. (See Exhibit E-1).

6. Proposed Mud Drilling Program (Circulating Medium)

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0'-500'	8.4	29-40	N/C	Fresh water, using F/W Bentonite
500'-3400'	9.3-9.9	29-33	As Needed	Brine water and salt water clay
3400'-7000'	9.3-9.9	29	As Needed Mud up at TD	Brine water and salt water clay as needed. Fluid loss and lost circulation material as needed.

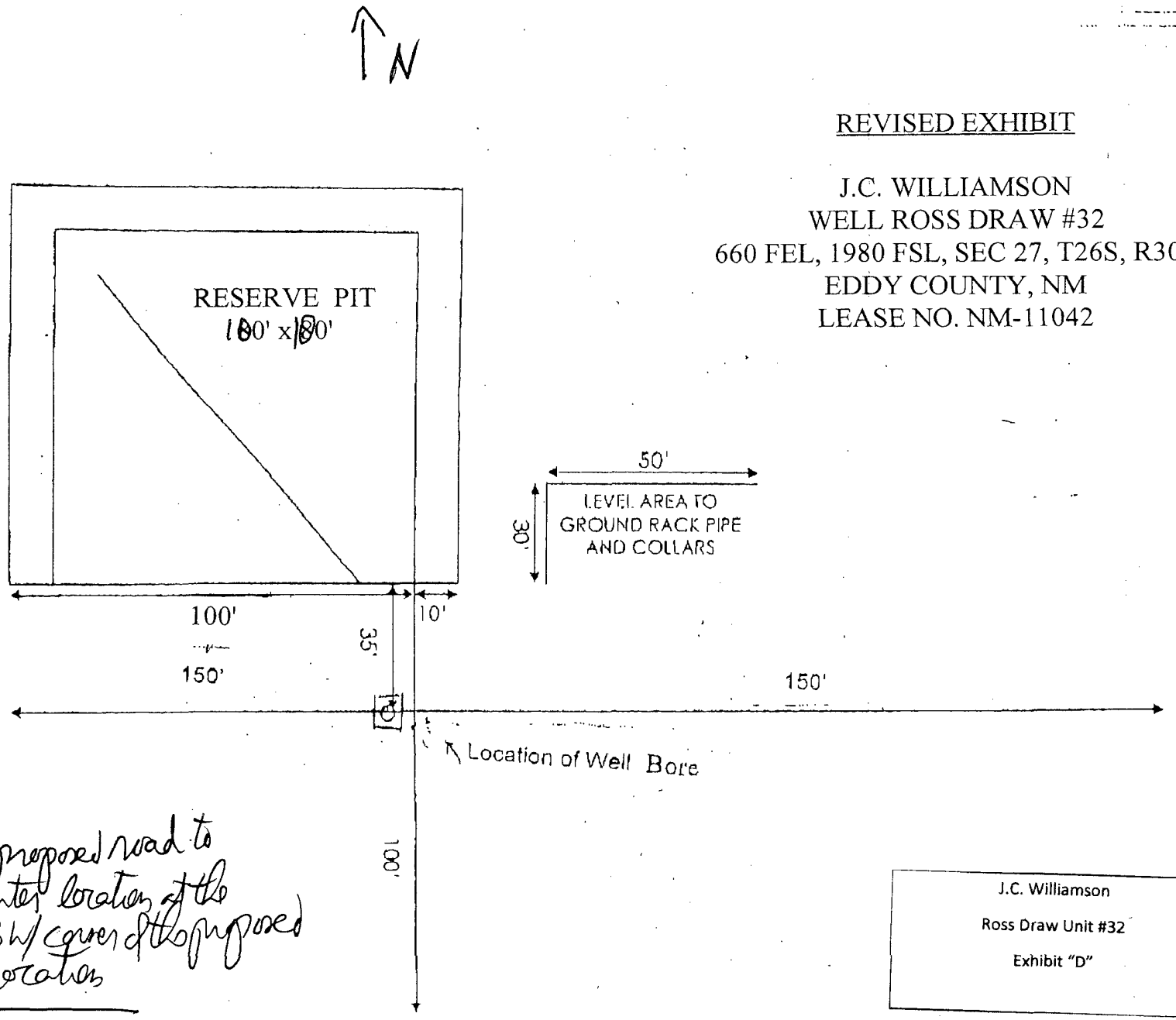
The necessary mud products for drilling mud, weight control and fluid loss control will be on location at all times and will be used as necessary.

7. Auxiliary Well Control and Monitoring Equipment:
   a. A Kelly cock will be maintained 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 at all times after drilling out the 13-3/8" casing shoe and until the 5-1/2" casing is set and cemented. Breathing equipment will be on location after the drilling the 13-3/8" shoe until total depth is reached and 5 ½" is set and cemented.

8. Logging, Coring and Testing Program: See COA
   a. Drill stem tests will be based on geological sample shows, but none are anticipated.
   b. The open hole electrical logging program will be:
      i. Total Depth to Intermediate Casing: Dual Laterolog-Micro Laterolog with SP and Gamma Ray; Compensated Neutron – Density log with Gamma Ray and Caliper. Intermediate casing.
      ii. Intermediate Depth to Surface: Compensated Neutron with Gamma Ray
      iii. No coring program is planned.
      iv. Additional prospective zone testing may be initiated subsequent to setting the 5-1/2" production casing. Specific intervals will be targeted based on open hole log evaluation, geological sample shows, drill stem tests and cased hole logs. This may be adjusted depending on well conditions.

9. Potential Hazards:
   a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. However, if H2S should be encountered, the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur, but if loss of circulation does occur, lost circulation materials will be on location to control said loss. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3500 psi and Estimated BHT 150°.

10. Anticipated Starting Date and Duration of Operations:
   a. Road and location construction will begin after the BLM has approved this Application to Drill and as soon as a State of New Mexico MUD permit is obtained. Anticipated spud date will be as soon as a suitable drilling rig becomes available. Move in operations and drilling operations are expected to take 30 days. If production casing is run, then an additional production 30 - 45 days will be needed to complete well, construct surface facilities and lay flow lines to existing facilities in order to place well on production.



REVISED EXHIBIT

J.C. WILLIAMSON
WELL ROSS DRAW #32
660 FEL, 1980 FSL, SEC 27, T26S, R30E
EDDY COUNTY, NM
LEASE NO. NM-11042

proposed road to enter location at the SW/corner of the proposed location

J.C. Williamson
Ross Draw Unit #32
Exhibit "D"

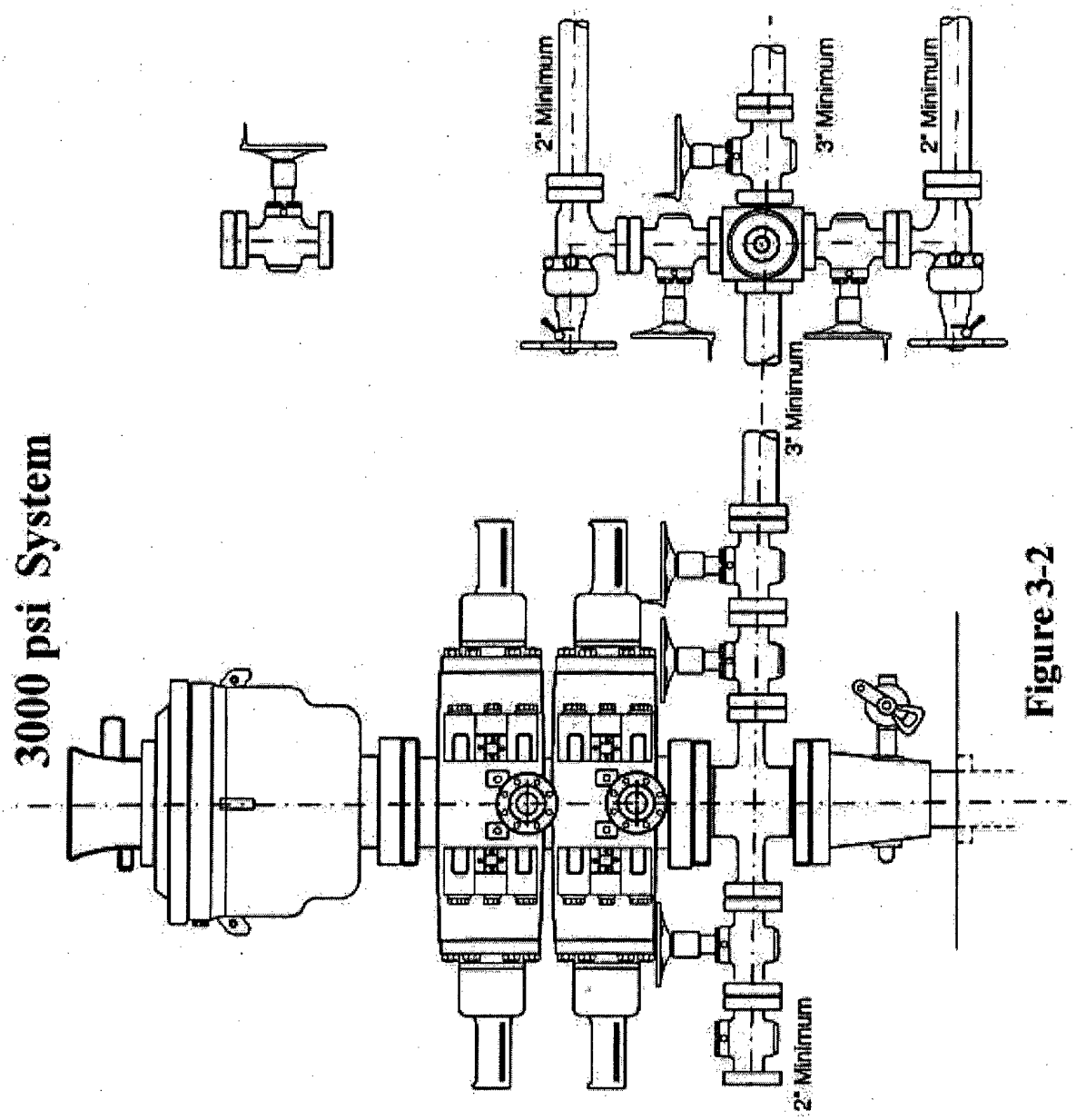
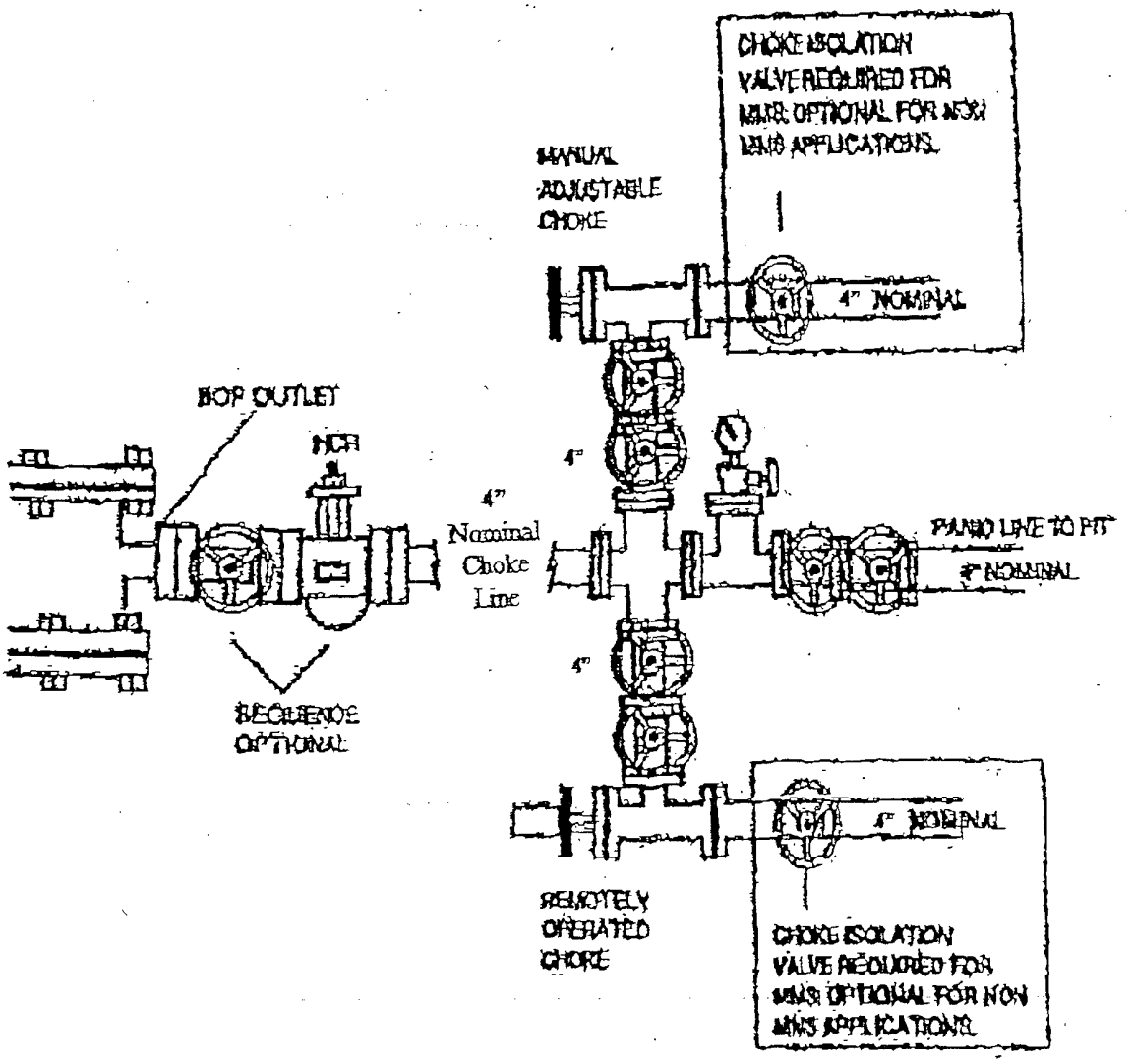

3000 psi System
2" Minimum
3" Minimum
2" Minimum
3" Minimum
2" Minimum

Figure 3-2

DRILLING OPERATIONS
CHOKE MANIFOLD
3M SERVICE



REVISED EXHIBIT

J.C. WILLIAMSON
WELL ROSS DRAW #32
660 FEL, 1980 FSL, SEC 27, T26S, R30E
EDDY COUNTY, NM
LEASE NO. NM-11042

Choke Manfold Schematic

Ross Draw Unit #32

Salazar Drilling Company

Exhibit "E-1"

SURFACE USE AND OPERATIONS PLAN

J.C. WILLIAMSON
ROSS DRAW Unit #32

660 FEL, 1980 FSL, SEC 27, T26S, R30E
Eddy County, New Mexico
Lease No. NM-11042

1. EXISTING ROADS:
Vicinity map Exhibit "B" is a portion of a general map of the vicinity of the area surrounding the proposed location. Exhibit "B-1" shows existing wells in the area of the proposed location. Exhibit "C" is a portion of a USGS plat contour map, and road map showing the location of the proposed well. Access to the location will be gained by using an existing road which leads west from Lea County Road 1, leading some 13 miles from the turn off from the pavement, into Eddy County, New Mexico, and which leads to the South line of Section 27. This road connects to existing Ross Draw lease roads as shown, and leads out to the west, connecting to Eddy County, road 725. This road, which then connects to New Mexico highway 285, which runs from Pecos, Texas to Carlsbad, NM. Entry to this highway is at state mile marker #4. Existing lease roads will be utilized where ever possible.

2. PLANNED ACCESS ROAD:
   a. PROPOSED ACCESS ROAD: The proposed access road will run east from the southeast edge of the Ross Draw Unit #30 location, approximately 1,100 feet to the Southwest edge of the proposed Ross Draw Unit #32 location. The width of the road will be 12 feet, except where the road commences, near the Ross Draw Unit #30 location, where the road will need to be 24 feet wide for 100 feet to accommodate trucks that need to pass each other.

   b. SURFACING MATERIAL: Some surfacing material may be needed or prepare the location. If necessary, 4" of caliche, which will need to be watered and compacted will be used. Surfacing materials needed will be removed from an approved caliche pit, located 4.0 miles to the west of the location, unless another approved caliche pit can be found at a closer location.

   c. MAXIMUM GRADE: Two Percent

   d. TURNOUTS: None Required.

   e. DRAINAGE PATTERN: The access road will be accessed with drainage to the sides.

   f. CULVERTS: None Required.

   g. CUTS AND FILLS: None necessary. Only clearing and minor leveling will be required.

   h. GATES AND CATTLE GUARDS: There will need to be a cattle guard installed and a barbed wire fence, which will need to be cut and properly braced so as to restore the integrity of the existing and accommodate the cattle guard that is to be installed. The width of the road

will be 12 feet during surface, except at the beginning of the road, where 24 feet will be needed to allow trucks to pass each other.

3. LOCATION OF EXISTING WELLS
   a. Existing wells in the area are shown on Exhibit "B".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:
   a. There are existing facilities owned and operated by J.C. Williamson that will be utilized by this lease, which are the battery and treating facilities put on the lease in association with the J.C. Williamson, Ross Draw Unit #11.

   b. If the proposed well is completed for production, the tank battery for this well will be the production facility constructed for the J.C. Williamson Ross Draw Unit #11. This well will be connected to this existing production facility by a 2 ½ " steel flowline laid on the surface of the ground and constructed crossing the lease leading along existing roads to the J.C. Williamson Ross Draw Unit #11 production facility.

5. LOCATION AND TYPE OF WATER SUPPLY

   a. Fresh water necessary for drilling will be purchased and hauled to the well site over existing and proposed roads. Treated Produced Delaware formation Brine water will be purchased, hauled or brought by temporary surface pipeline laid down existing roads to the location for make up water needed for the drilling of this well in the 11" and 7-7/8" portions of the hole.

6. SOURCE OF CONSTRUCTION MATERIALS:
   The construction materials that may be needed can be obtained from an approved caliche pit located in SW/4 NE/4 of Sec. 25, T-26-S, R-29-E, Eddy County, New Mexico, or such other caliche pits as approved by the Bureau of Land Management, unless another approved caliche pit is designated.

7. METHODS OF HANDLING WASTE DISPOSAL
   a. Drill cuttings will be disposed of in a lined temporary drilling pit, using a pit specifically constructed for the needs of this well.

   b. Drilling fluid will be allowed to evaporate in the drilling pit or removed to another subsequent well being drilled, or taken to an approved disposal facility.

   c. All pits will be fenced with normal 4 strand barbed wire fencing materials, using metal corner braces and metal T-posts, to prevent livestock from entering the temporary pit area.

   d. Salt water recovered during any testing of this well, will be disposed of in the temporary drilling pit.

   e. Oil produced during test will be stored in a test tank, after which, after the well is completed, said oil will be transferred to the Ross Draw Unit #11 production facility, treated, and sold.

f. Current laws and regulations pertaining to the disposal of human waste will be complied with.

g. Trash, waste paper, garbage and junk, will be contained in metal trash bins designed for this purpose to prevent scattering by the wind, and will be removed and deposited for deposit in an approved sanitary landfill within 30 days of the completion of drilling operations.

8. ANCILLARY FACILITIES
   a. A flowline from the wellhead of this well will be laid along the edge of the proposed access road,and connected to an existing production gathering flowline which connects to the Ross Draw Unit #11 battery, where all well head effluent will be processed, sold or properly disposed of.

9. WELL SITE LAYOUT
   a. Exhibit "D" shows the relative location and dimensions of the well cellar, temporary drilling pit, trash pit and the location of major rig components. Pits will be dug only after all required permits are obtained. The prepared road will enter the location on the east edge of the location.

   b. Only minor leveling of the well site will be required. No significant cut and fill will be necessary.

10. PLANS FOR RESTORATION OF THE SURFACE
    a. After completion of drilling and/or completion operations, all equipment and other material not needed for continuing production operations will be removed from the location as soon as possible. Temporary pits will be remediated as by BLM requires, and the location cleaned of all trash and junk to leave this site in as an aesthetically pleasing condition as possible. It is anticipated that all cuttings, pit lining material and contaminated soil will be removed and hauled to an approved disposal facility as per a State of New Mexico pit closure permit.

    b. Any unguarded pits containing fluids will be fenced until they are remediated, or removed.

    c. After final abandonment of the well, all equipment, junk, and trash will be removed or buried as specified and the location cleaned. Then, any special rehabilitation and/or special vegetation requirements of the surface management agency will be complied with and accomplished as expeditiously as possible.

11. OTHER INFORMATION
    a. Topography: The land surface is relatively level. Regional slope is to the southwest.

    b. Soil: The top soil at the well site is gravelly, loamy sand.

    c. Flora and Fauna: The vegetative cover is sparse and consists of mesquite, greasewood, yucca, weeds and sparse range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbit, rodents, reptiles, dove and quail.

    d. Ponds and Streams: The Pecos River is approximately 6-1/2 miles south - southwest of the proposed well site. Red Bluff Reservoir is approximately 6-1/2 miles to the southwest of the

location. There are no natural ponds or streams near the location.

e. Residence and Other Structures: There are no occupied dwellings within two miles of the proposed well site. There are no windmills within one mile of this location.

f. Archaeological, Historical or Other Cultural Sites: None observed in the area, but the requirements for archaeological research will be complied with.

g. Land Use: Cattle grazing and hunting in season.

h. Surface Ownership: Federal

12. OPERATOR'S REPRESENTATIVE:
Representative responsible for assuring compliance with the approved Surface User Plan is as follows:

Ralph E. Williamson
Chief Project Engineer, and Agent for J.C. Williamson, Operator
8202 IH-35 North, Suite 490
San Antonio, TX 78239
Office: 210-590-4700
Fax: 210-590-4705

13. CERTIFICATION:
I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that the statements made in the plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by J.C. Williamson and his contractors and subcontractors in conformity with this plan and the term and conditions under which it is approved.

Date: 7/29/2010

BY: _____

RALPH E. WILLIAMSON
CHIEF PROJECT ENGINEER, AND
AGENT FOR J.C. WILLIAMSON,
OPERATOR

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	JC Williamson
LEASE NO.:	NM11042
WELL NAME & NO.:	32 Ross Draw
SURFACE HOLE FOOTAGE:	1980' FSL & 660' FEL
BOTTOM HOLE FOOTAGE	1980' FSL & 660' FEL
LOCATION:	Section 27, T. 26 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

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)

Construction and use of open reserve pits requires approval from NMOCD.

Approval of surface disturbance by the BLM for the purpose of constructing the reserve pit is contingent upon approval of the pit by NMOCD.

No construction of the pit will begin until the operator has received permission and any additional instructions regarding the pit from NMOCD.

Plan of Development

Operator is to submit a Unit Plan of Development (UPOD) annually to the BLM. Guidelines for UPOD are available upon request at the BLM Carlsbad Field Office.

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. V-DOOR DIRECTION - East

C. RESERVE PITS – North

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 110' X 110' on the North side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 4 inches in depth. The topsoil will be used for interim and final reclamation.

E. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call theCarlsbad Field Office at (575) 234-5972.

F. 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.

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

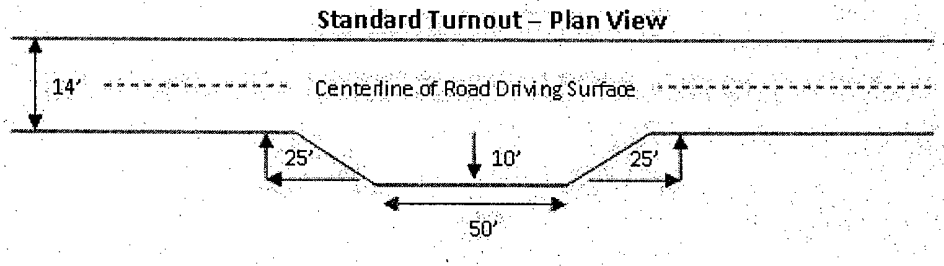
Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on the uphill side of the road.

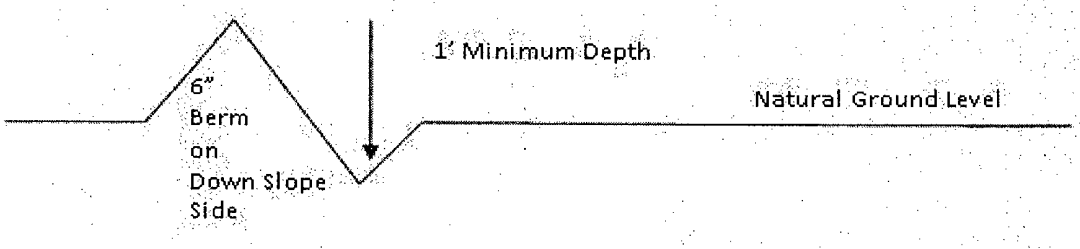
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

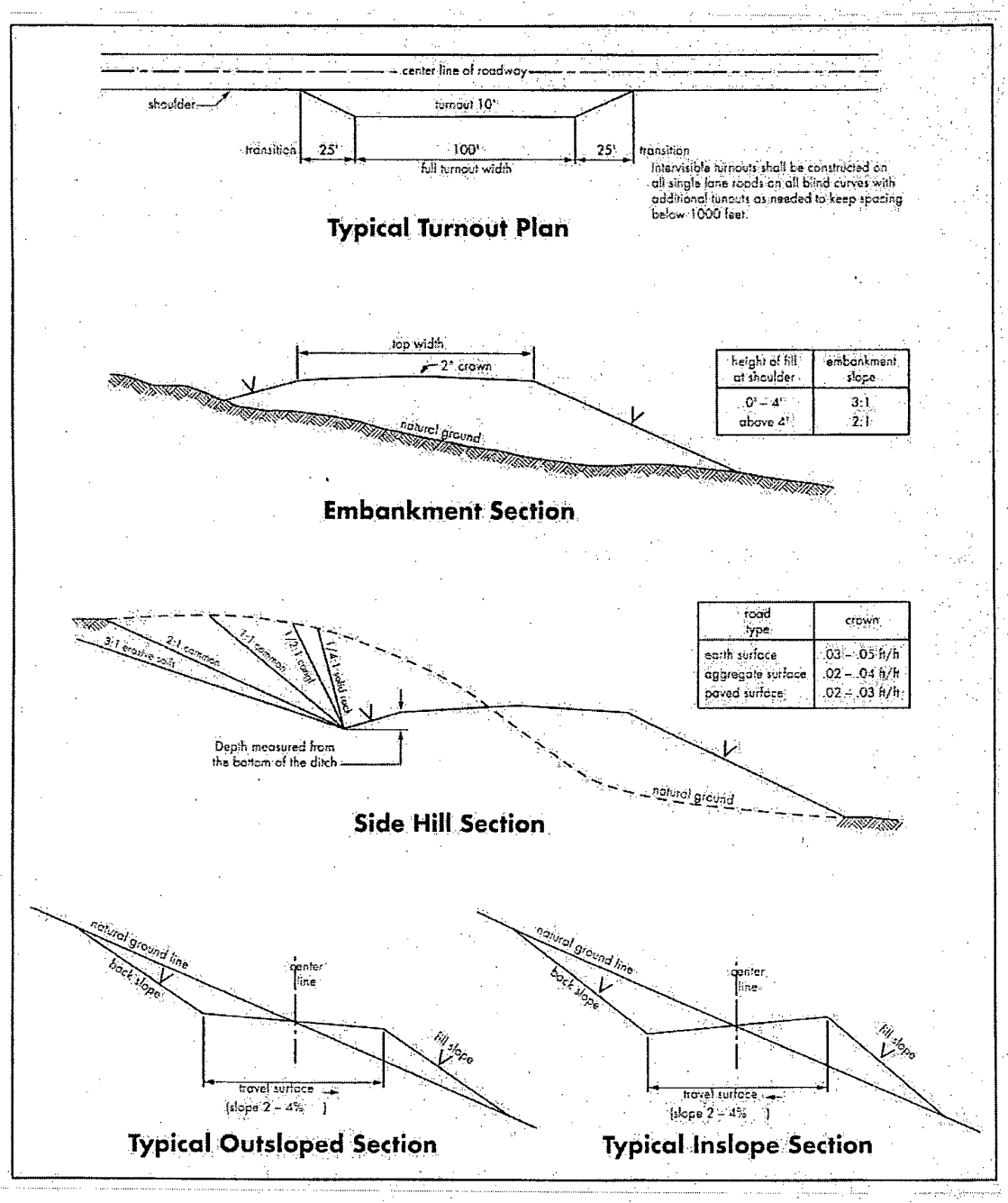
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



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

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

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

Wait on cement (WOC) time prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. 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.

Medium Cave/Karst
Possible lost circulation in the Redbeds, evaporates, and the Delaware Mountain group.

If any used casing is utilized, casing must meet Onshore Order 2 requirements.

1. The **13-3/8** inch surface casing shall be set at **approximately 875 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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    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 **8-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **May be setting within the salt – Operator shall set within the Castile anhydrite or Lamar Limestone.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   a. First stage to DV tool, cement shall:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

   b. Second stage above DV tool, cement shall:

   ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. 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.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8** inch intermediate casing shoe shall be **3000 (3M)** psi.

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

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) prior to initiating the test.

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

    d. 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.**

    e. 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.

    f. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

DHW 092910

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

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

B. PIPELINES – not requested in APD

C. ELECTRIC LINES – not requested in APD

IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as shown below.

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 4, for Gypsum 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
Alkali Sacaton (Sporobolus airoides)	1.0
DWS Four-wing saltbush (Atriplex canescens)	5.0

DWS: DeWinged Seed

*Pounds of pure live seed:

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