ATS-08-543

OCD-HOBBS

Form 3160-3
(August 2007)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
NM LC 057509

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

1a. Type of work: ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No
N/A

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

8 Lease Name and Well No. <29943>
G L ERWIN B FEDERAL NCT-2 #14

2. Name of Operator CHEVRON U.S.A. INC. <4323>

9 API Well No.
30-025-38895

3a. Address 15 SMITH ROAD, MIDLAND, TX 79705

3b Phone No. *(include area code)*
432-687-7375

10 Field and Pool, or Exploratory
LNGL MATTIX 7 RVR QN GRAYBURG

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface 1225' FSL, & 1015' FEL Unit P NSL-5765
At proposed prod zone SAME
UNORTHODOX LOCATION

11 Sec., T. R. M. or Blk. and Survey or Area
SEC 35, UL P, T-24-S, R-37-E

14 Distance in miles and direction from nearest town or post office*

12 County or Parish
LEA

13 State
NM

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 320	17 Spacing Unit dedicated to this well 40
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth 4300'	20 BLM/BIA Bond No on file CA0329 Nationwide Bond
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3162' GL	22 Approximate date work will start*	23 Estimated duration 10 DAYS TO DRILL

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 Denise Pinkerton	Name *(Printed/Typed)* Denise Pinkerton	Date 04/02/2008

Title
Regulatory Specialist

Approved by *(Signature)* /s/ James Stovall	Name *(Printed/Typed)*	Date MAY 4 2008
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 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)

RECEIVED
MAY 07 2008
HOBBS OCD

*(Instructions on page 2)

Capitan Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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 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
30-025-38895	37240	Langlie Mattix; Seven Rivers; Queen; Grayburg

Property Code	Property Name	Well Number
29943	G.L. ERWIN B FEDERAL NCT-2 #	14

OGRID No	Operator Name	Elevation
4323	CHEVRON USA INC.	3162'

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	35	24-S	37-E		1225	SOUTH	1015	EAST	LEA

Bottom Hole Location If Different From Surface

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

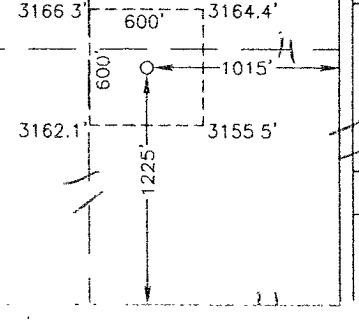
Dedicated Acres	Joint or Infill	Consolidation Code	Order No
40			NSL-5765

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

GEODETIC COORDINATES
NAD 27 NME

Y=427596.6 N
X=872974.5 E

LAT.=32.169837° N
LONG.=103.127981° W



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

Denise Pinkerton 4-02-08
Signature Date

Denise Pinkerton
Printed Name

SURVEYOR CERTIFICATION

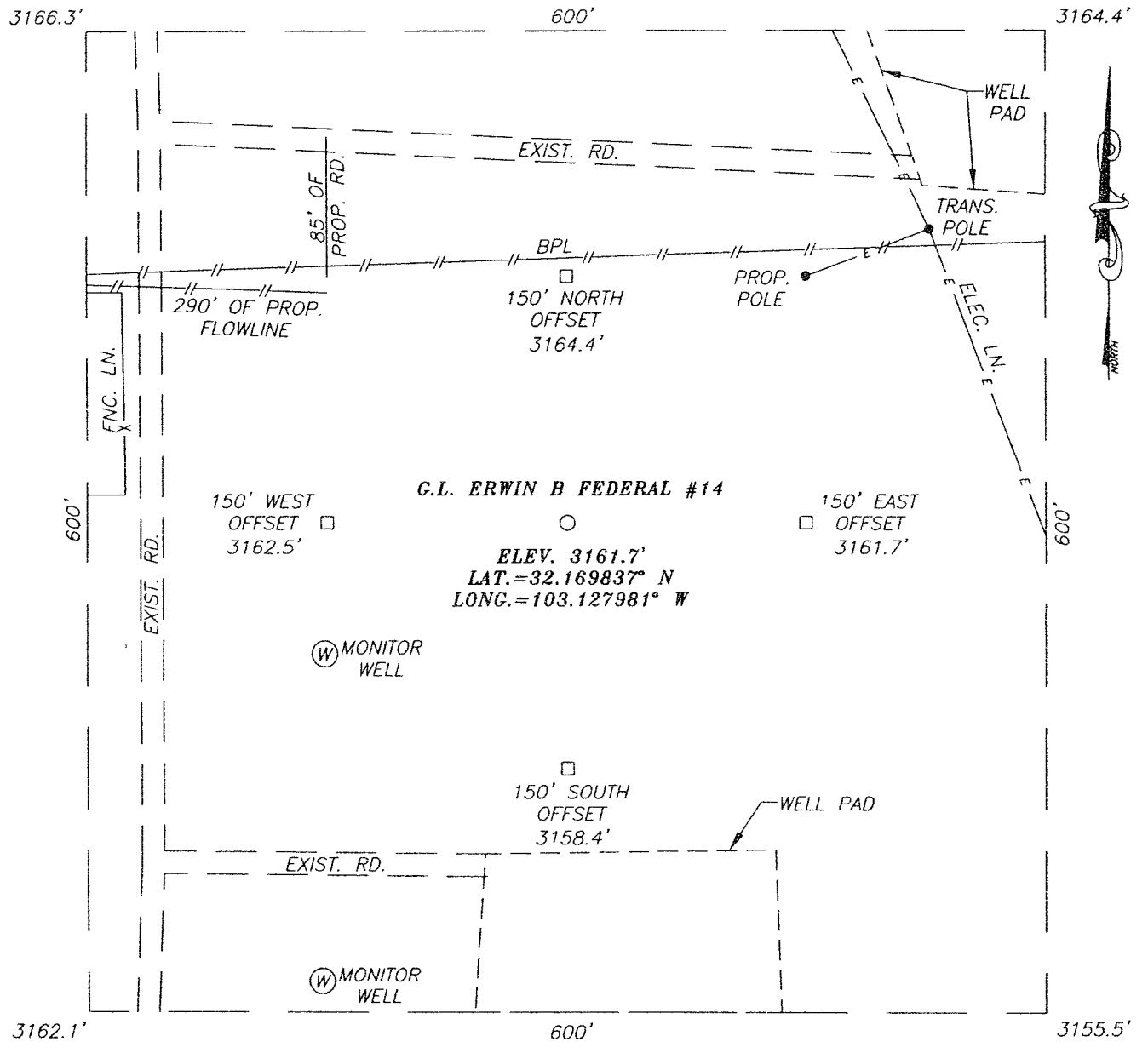
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief

OCTOBER 8, 2007
Date Surveyed DSS

Signature & Seal of Professional Surveyor
NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR
Ronald J. Eidson 10/15/07
07.11.1364

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

SECTION 35, TOWNSHIP 24 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF WILLIS RD. (CO. RD. #J-4) AND DOLLARHIDE RD. (CO. RD. #J-14), GO EAST APPROX. 1.0 MILES ON DOLLARHIDE RD., CROSS CATTLE GUARD. TURN RIGHT AND GO SOUTH APPROX. 1.0 MILE TO LEASE RD. TURN RIGHT AND GO APPROX. 0.25 MILES. TURN RIGHT AND GO NORTH APPROX. 0.1 MILES. THIS LOCATION IS 300 FEET EAST.

100 0 100 200 Feet

Scale:1"=100'

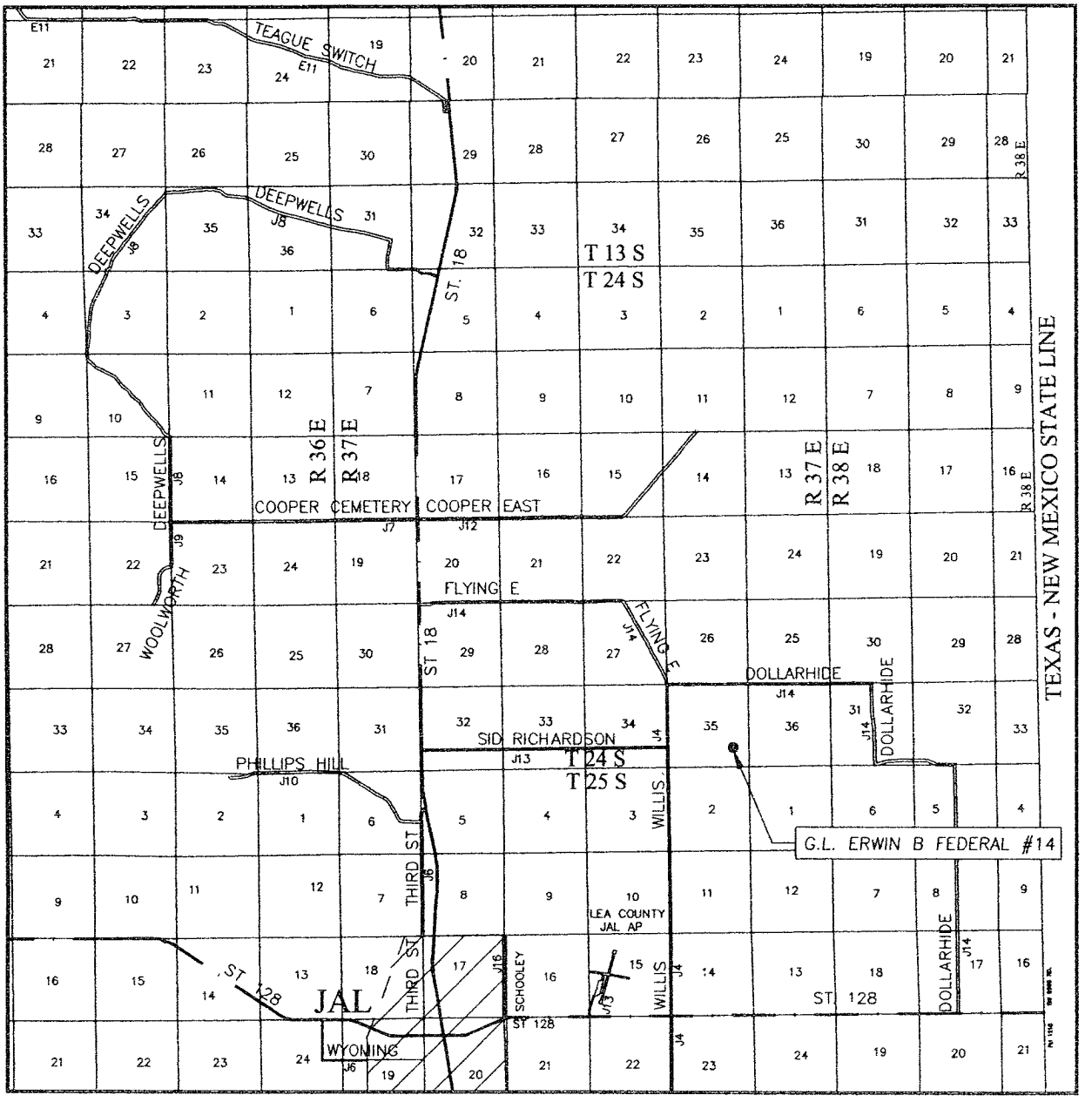
PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M 88240
(505) 393-3117

CHEVRON USA INC.

G.L ERWIN B FEDERAL #14 WELL
1225 FEET FROM THE SOUTH LINE AND
1015 FEET FROM THE EAST LINE OF SECTION 35,
TOWNSHIP 24 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 10/8/07	Sheet 1 of 1 Sheets		
W.O. Number: 07.11.1364	Dr By: DSS	Rev 1:N/A	
Date: 10/13/07	Disk:	07111364	Scale:1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 35 TWP. 24-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1225' FSL & 1015' FEL

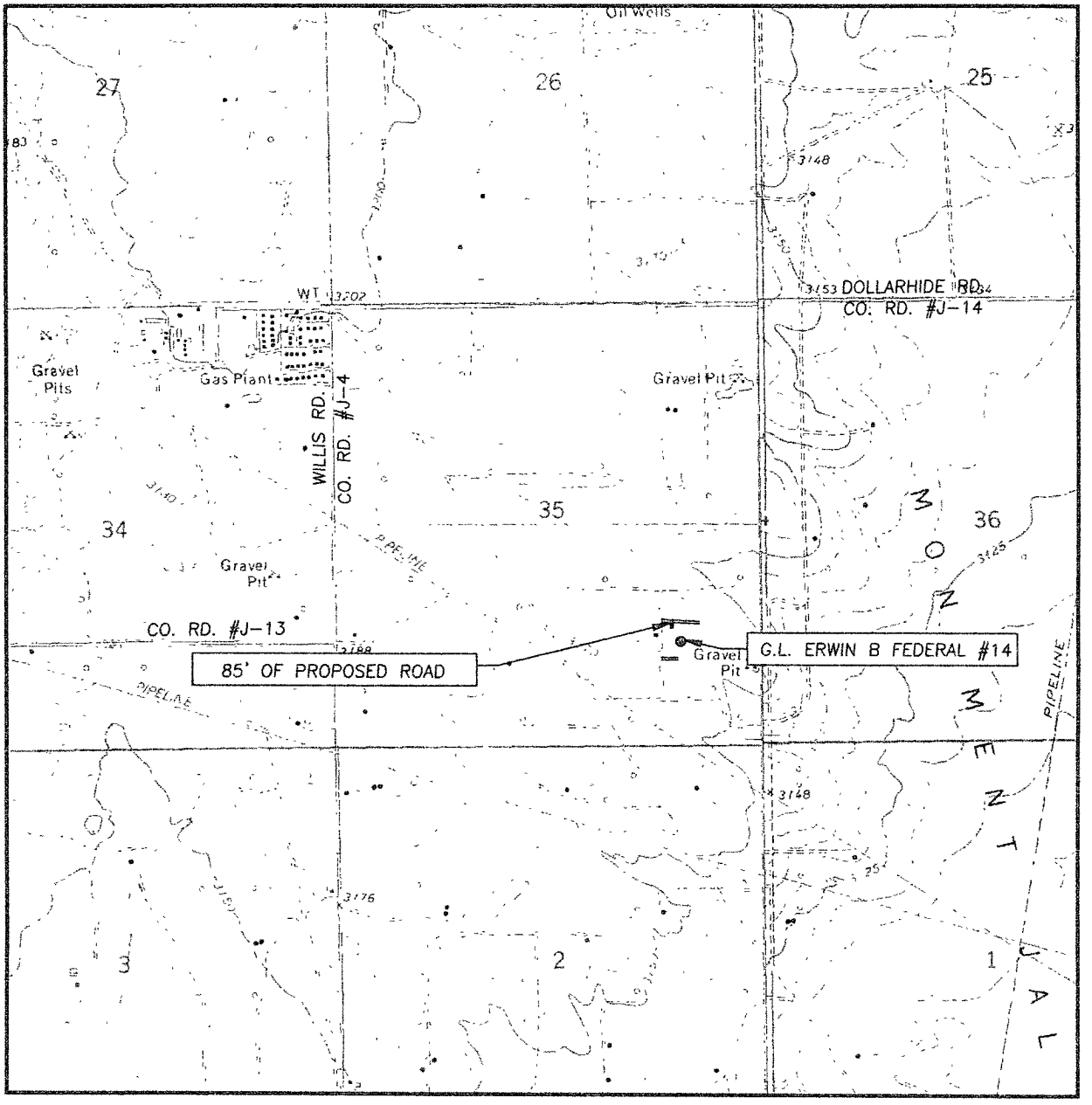
ELEVATION 3162'

OPERATOR CHEVRON USA INC.

LEASE G.L. ERWIN B FEDERAL

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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10 FEET
JAL NW, N.M.

SEC. 35 TWP. 24-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1225' FSL & 1015' FEL

ELEVATION 3162'

OPERATOR CHEVRON USA INC.

LEASE G.L. ERWIN B FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
JAL NW, N.M.

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

DRILLING PROGRAM
G.L.Erwin B Federal NCT-2#14

1. **Geologic Name of Surface Formation**

   a. Tertiary Ogallala Formation

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

a.	Yates	2360'	Oil/Gas
b.	Seven Rivers	2625'	Oil/Gas
c.	Queen	3100'	Oil/Gas
d.	Grayburg	3390'	Oil/Gas
e.	San Andreas	3560'	Oil/Gas
f.	Total Depth	4300'	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 8-5/8" casing at 1015' and circulating cement back to surface. The productive intervals will be isolated by setting 5-1/2" casing to total depth and circulating cement to the surface.

3. **Casing Program:**

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used
11"	0' – 1015'	8-5/8"	24#	ST&C	J-55	New
7-7/8"	0'– 4300'	5-1/2"	15.5#	LT&C	K-55	New

Surface

	Burst	Collapse	Tension
Req'd S.F.	1.2	0.85	1.8
Calc'd S.F.	5.6	2.9	1.9
Load	MASP, shoe w/ est. frac. at 11.5ppg, 10.0 ppg PP at next shoe f/ AGG.	Saltwater gradient = 8.8 ppg	Buoyed wt w/ 100,000 lbs over-pull.
Backup	Freshwater gradient = 8.3 ppg	Full Evacuation = 0 psi	n/a

Production

	Burst	Collapse	Tension
Req'd S.F.	1.1	0.85	1.8
Calc'd S.F.	1.2	1.8	3.8
Load	Maximum surf. frac. pressure = 4000psi combined w/ treatment fluid HP = 8.3 ppg	Saltwater gradient = 8.8 ppg	Buoyed wt w/ 100,000 lbs over-pull.
Backup	PP = 8.3 ppg	Full Evacuation = 0 psi	n/a

Notes:

1. S.F. = Safety Factor
2. MASP = Maximum Anticipated Surface Pressure
3. AGG = Annular Gas Gradient
4. HP = Hydrostatic Pressure
5. PP = Pore Pressure

4. Cement Program:

a. 8-5/8" Surface — Cement with a single stage (through an insert float and shoe) consisting of the following lead and tail: Lead: 250sx Class C with 4% gel and 2% CaCl2 1.74 cu. ft. /sx yield. Tail: 150sx Class C w/ 2%CaCl 14.8ppg, 1.34 cu. ft / sx yield, TOC at 0' (surface). Calculations based on 100% open-hole excess (or greater) over theoretical hole volume, with calculated top of tail at 650'.

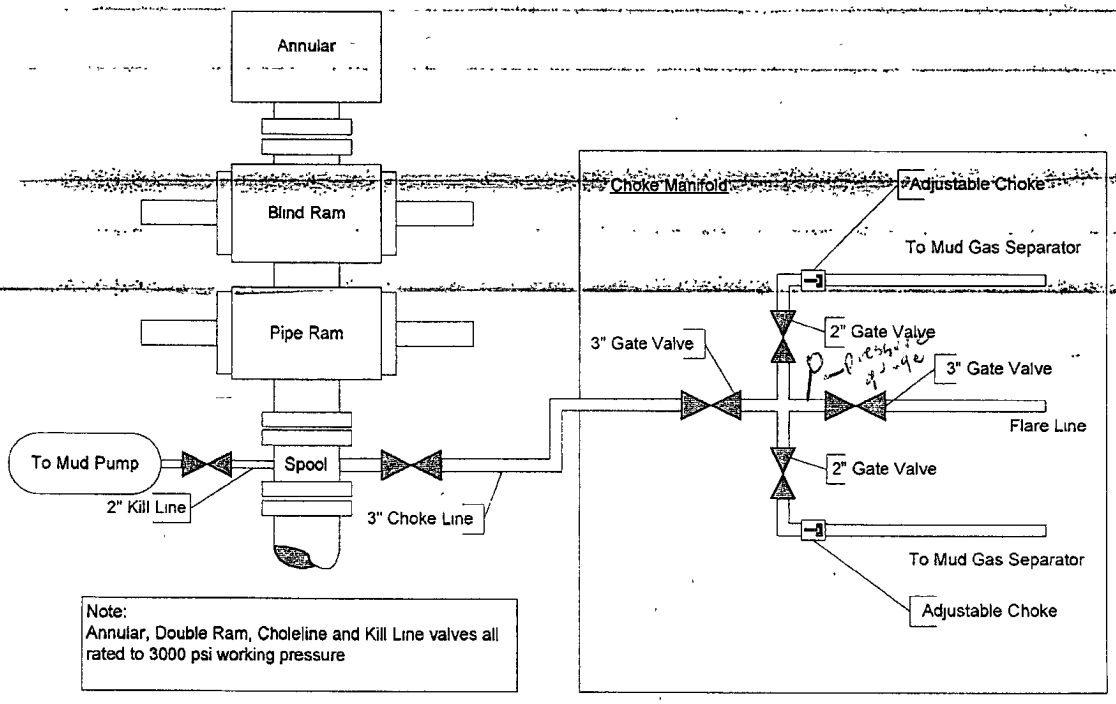
b. 5 1/2" Production — Cement with a single stage (through a float shoe and float collar) consisting of the following lead and tail: Lead: 365 sx 35:65 Poz Class C w/ 6% gel, 5% salt and 1/4pps HOWCO Phenoseal (or equivalent), 2.15 cu. ft / sx yield. Tail: 630sx 50:50 Poz Class C with 2% gel, and 5% Salt and 1/4pps HOWCO Phenoseal (or equivalent), 1.35 cu. ft / sx yield,), TOC at 0' (surface). Calculations based on 150% open-hole excess (or greater) over theoretical hole volume, with calculated top of tail at 2350'.

The cement volumes pumped could be revised pending the following input.

1. On the surface hole, a visible flag (red dye) will be pumped as a part of the pre-flush, when dye reaches surface rig crews will immediately pump calculated tail, to avoid mixing and disposing of excess lead.
2. If a caliper log is obtained during open-hole logs. Cement pumped will be a minimum of 35% excess over open-hole log.

5. Pressure Control Equipment:

Capstar 22 - BOPE



Other BOPE information:

- BOPE will be hydraulically operated.
- A 3M BOP will be installed on the 8-5/8" casing, but will be tested to as a 2M system.
- Blind rams will be functioned each time the drill string is out of the hole.

6. Proposed Mud Circulation System

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 1015'	8.3	32-40	No Control	Fresh Water
1015' - 4300	10.0	29	No Control	Saturated Brine

The necessary mud products for weight addition and fluid loss control will be on location at all times. Mud weights may be raised to safely accommodate well control events.

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 8-5/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location from spud shoe until total depth is reached.

7. Logging, Coring, and Testing Program:

a. The open hole electrical logging program will be:
   i. Total Depth to Intermediate Casing: Gamma Ray, Resistivity, Neutron Density and Caliper.
   ii. Spectral Gamma Ray and Borehole Sonic.
b. No coring program is planned.
c. No Drill Stem Tests are planned

8. Potential Hazards:

a. No abnormal pressures or temperatures are expected. Monitor pH for H2S and if pH drops rapidly, add lime, Barocor 95 or H800 (HOWCO additives) as per mud engineer. Ensure corrosion inhibitors, amines and H2S scavengers are properly maintained in mud system, due to the potential for H2S. If H2S 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 2000 psi and Estimated BHT 95°F.

9. Anticipated Starting Date and Duration of Operations:

a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval. Move in operations and drilling is expected to take approximately 7 days. Production casing will be run utilizing the Capstar 22. After the wellhead is secured the Capstar 22 will be moved to the next drilling location, then the well will be stimulated and competed by a separate rig. Production lines will be laid for the purpose of transporting produced fluids to existing surface facilities.

PROPOSED DRILLING PROGRAM

G.L.Erwin B Federal NCT-2 #14

Section 35

Township 24 South

Range 37 East

Lea County, New Mexico

Surface Location: 1225' FSL, 1015' FEL

Prepared By:	Rick Parrish 28 February 2008
WBS Number:	TBD
API Number:	TBD
Chevno:	TBD

PROPOSED WORK

SURFACE HOLE:

1. Call the 1-800 dig number and notify BLM (505-234-5972) 3 working days prior to building location. Build location, install 14-3/4" cemented conductor, install cellar prior to moving in rotary tools.

2. Move in and rig up rotary tools, including closed loop system. Conduct safety meeting with rig personnel. Post drilling permit and emergency response plan in the dog house. Notify the BLM and OCD of intent to spud.

3. Drill 11" hole to ±975' with fresh water spud mud.

4 Run 8-5/8", 24#, J/K-55, STC casing as follows.
   a) Guide shoe
   b) 1 joint casing
   c) Insert float
   d) Casing to surface
   Centralize the bottom two joints and every fourth joint thereafter.

5 Cement in accordance with attached cementing summary. Check float. If float fails, shut in for a minimum of four hours. If cement does not circulate, will need to run temperature survey, notify BLM and 1" back to surface.

6. Cut off casing. Install casing (starting) head. Test starting head to 1000 psi (73% of collapse rating)

7. Nipple up BOP stack. Test BOPE to 250 psi low for 5 minutes, 1000 psi high. Test casing to 1000 psi.

8 Install H_2S detection equipment prior to drilling out.

PRODUCTION HOLE:

1 Drill 7-7/8" hole to ±4300' with 10# brine water. Deviation problems are possible.

2. Trip out and run open hole logs.

3. Trip in hole and trip out of hole laying down drill pipe

4. Run 5-1/2", 15 5#, J/K-55, LTC casing as follows:
   a) Float shoe
   b) 1 joint casing
   c) Float collar
   d) Casing to surface
   Centralize the bottom three joints and across any potential pay

15. Cement in accordance with attached cementing summary.

16. ND BOPs, set slips, and cut off casing. Install permanent 11" 3000 psi X 7-1/16" 3000 psi tubing head. Test seal to 50% of collapse rating

17. Release rig. Rig down and move out rotary tools.

POTENTIAL PROBLEMS

SURFACE HOLE:

Lost returns.

PRODUCTION HOLE:

Deviation.
Water flows.

MUD PROGRAM

Interval	Type	Weight (ppg)	Vis. (sec/qt)	Fluid Loss (cc)	Remarks
Surface	Fresh Wtr.	8.6	32	No control	Circulate reserve
Production	Brine	10	29	No control	Circulate reserve

Mud up to a starch/PAC system near TD for logging.

FORMATIONS

Name	Depth [feet]	Pressure [psi]
Yates	2360	n/a
Seven Rivers	2630	n/a
Queen	3100	n/a
Grayburg	3380	900
San Andres	3620	1500

EVALUATION PROGRAM

OPEN HOLE LOGS:

Platform Express – Spectral GR, Res, Neu/Den from TD to surface casing point.

SURFACE CEMENTING PROGRAM

Cement with Lead = 250 sacks Class "C" with 4% Gel & 2% $CaCl_2$ followed with Tail = 150 sacks Class "C" with 2% $CaCl_2$.

Minimum waiting on cement time: 12 hours

CEMENT PROPERTIES:

Slurry weight: (lead).....13.5 ppg
(tail)..... .... 14.8 ppg

Slurry yield: (lead).....1.74 ft^3 per sack
(tail)..... ... 1.34 ft^3 per sack

Cement must circulate to surface. If cement does not circulate, run a temperature survey six to eight hours after cementing. Contact the BLM and OCD and the Midland office for proper procedure to bring cement to surface. Normal procedure is to run one inch tubing down the annulus to top of cement, therefore one inch tubing should be on location or readily available.

Cement volume is based on 11" by 8-5/8" annular volume plus 100% excess.

PRODUCTION CEMENTING PROGRAM

Cement with Lead = 365 sacks 35:65 Poz:Class "C" with 6% Gel & 5% Salt & ¼ pps Flocele followed with Tail = 630 sacks 50:50 Poz.Class "C" with 2% Gel & 5% Salt & ¼ pps Flocele

CEMENT PROPERTIES:

Slurry weight: (lead).... .. .12.4 ppg
(tail)..... 14.2 ppg

Slurry yield: (lead)..... .2 15 ft^3 per sack
(tail)..... 1.35 ft^3 per sack

Cement is designed to circulate to surface. If cement does not circulate, may run a temperature survey to determine top of cement.
Cement volume is based on 7-7/8" by 5-1/2" annular volume plus 150% excess

CASING SUMMARY

SURFACE:

975', 8-5", 24 ppf, J/K-55, STC

PRODUCTION:

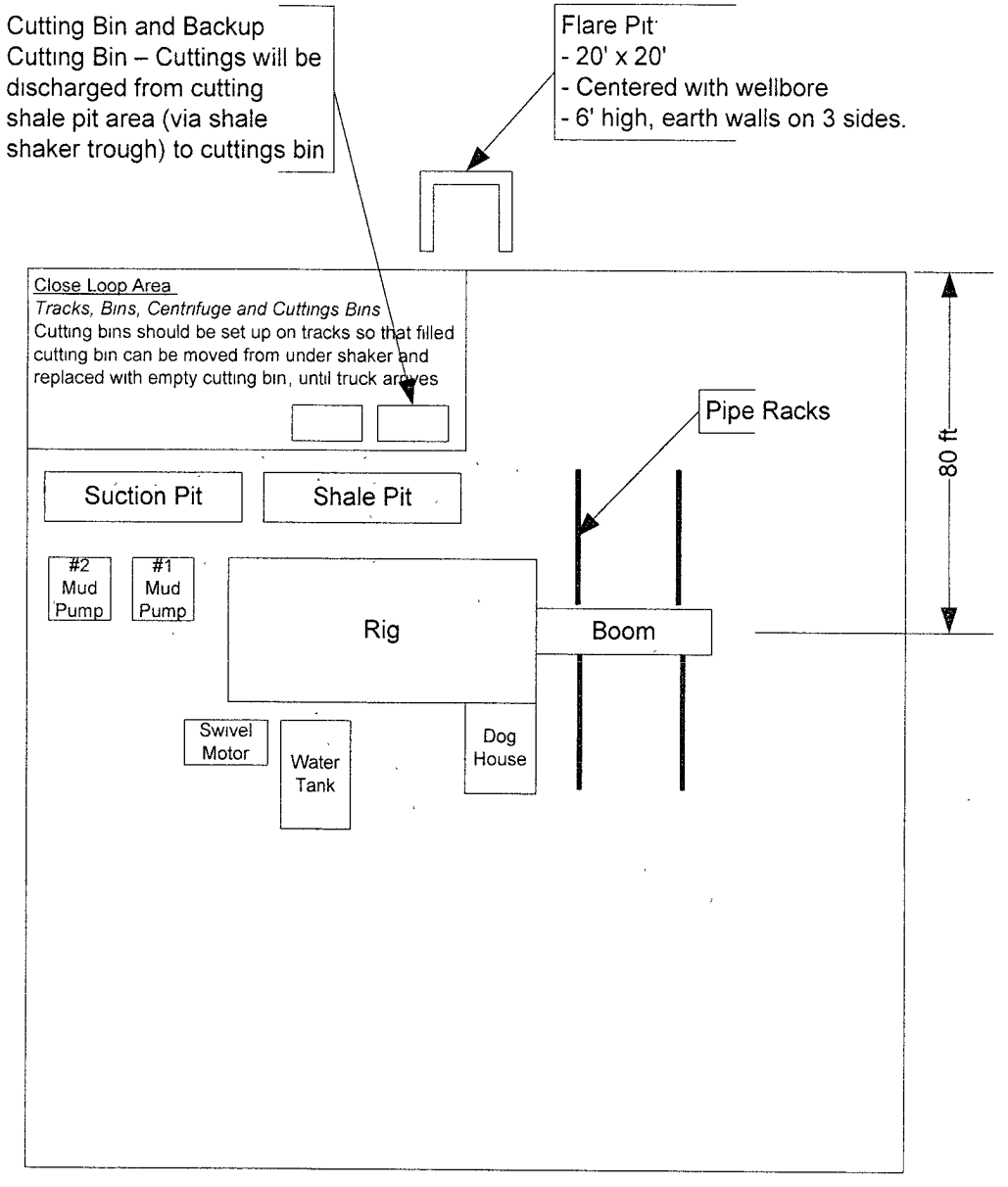
4300', 5-1/2", 15.5 ppf, J/K-55, LTC

CASING PROPERTIES

	BURST		COLLAPSE		Test
	Rated	(80%)	Rated	(80%)	Pressure
8-5/8", 24 ppf, J-55, STC	2950	2360	1370	1095	1000
5-1/2", 15.5 ppf, J-55, LTC	4810	3845	4040	3230	2000

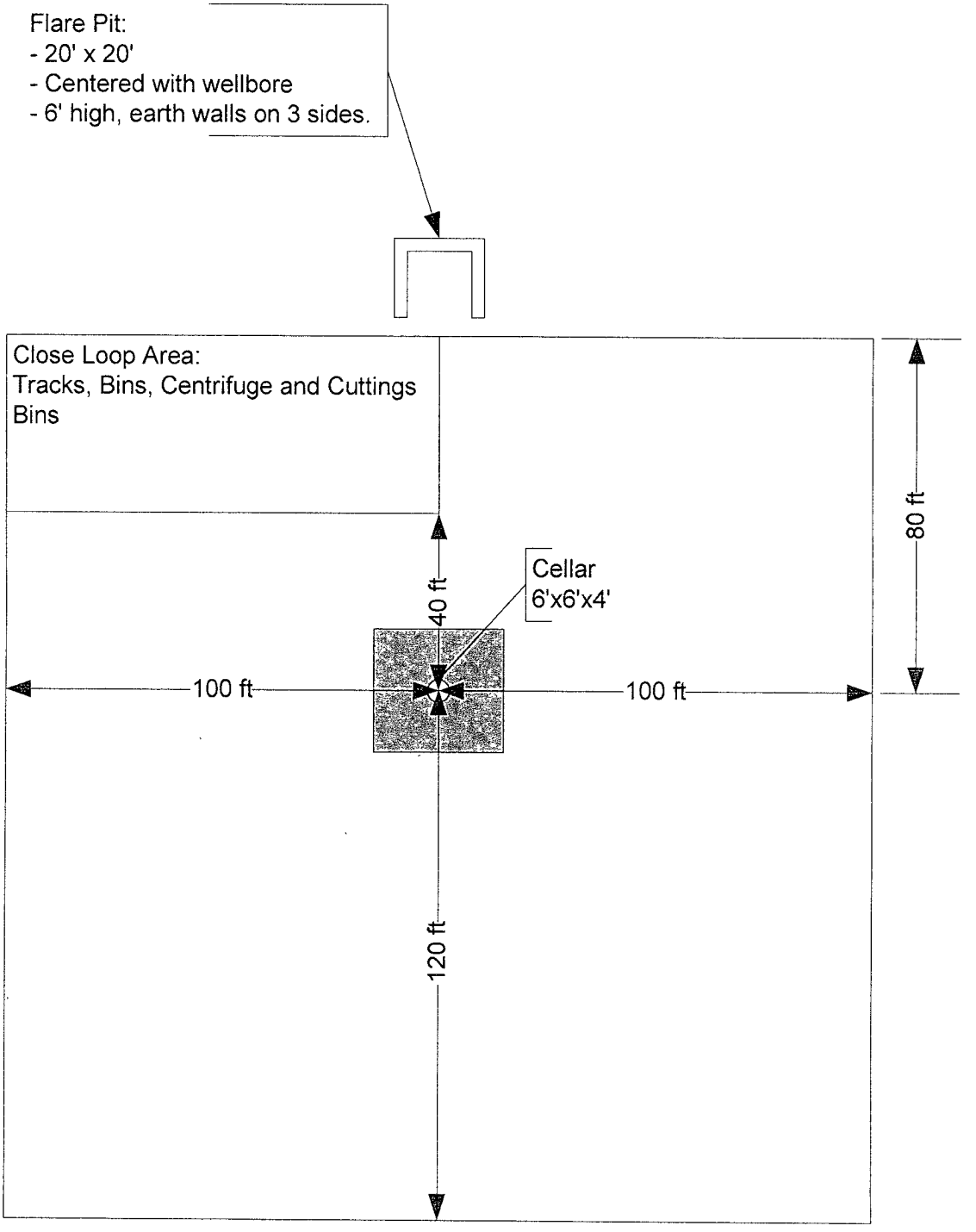
All casing is new & API Approved

Capstar 22 – Rig General Layout w/ Closed Loop System



Notes
1. This drawing is not to scale.
2. This drawing is intended to communicate basic rig layout only
3. If modification is required, Chevron MOC (Memorandum of Change) process will be utilized

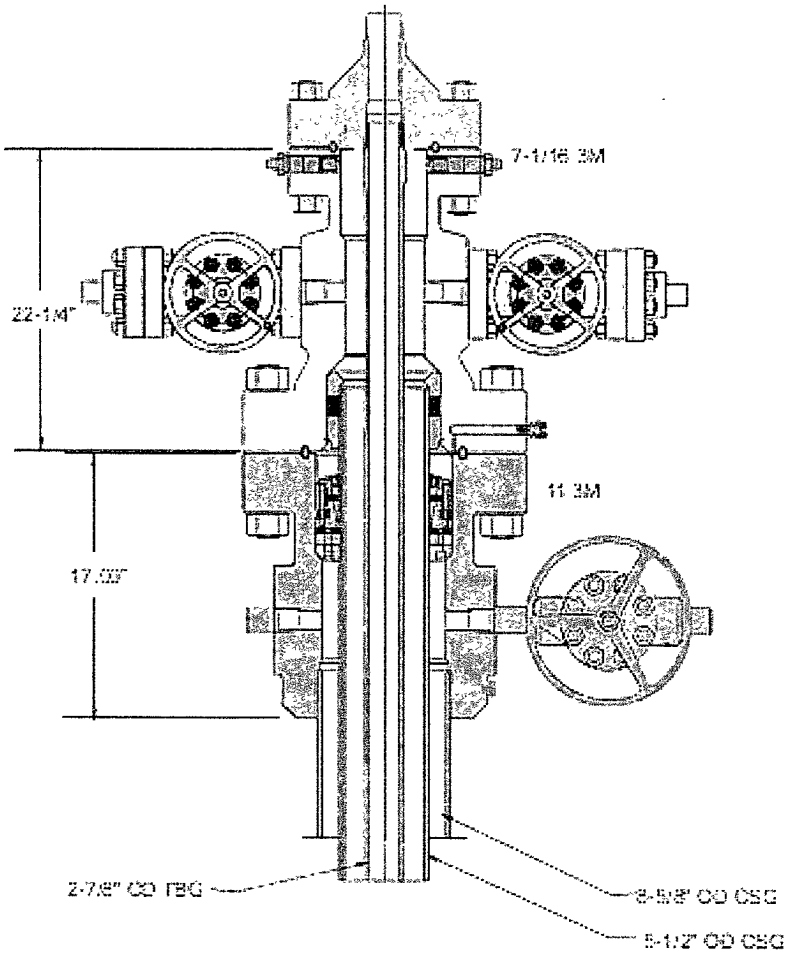
Capstar 22 – Rig Plat w/ Closed Loop System (pending approval)



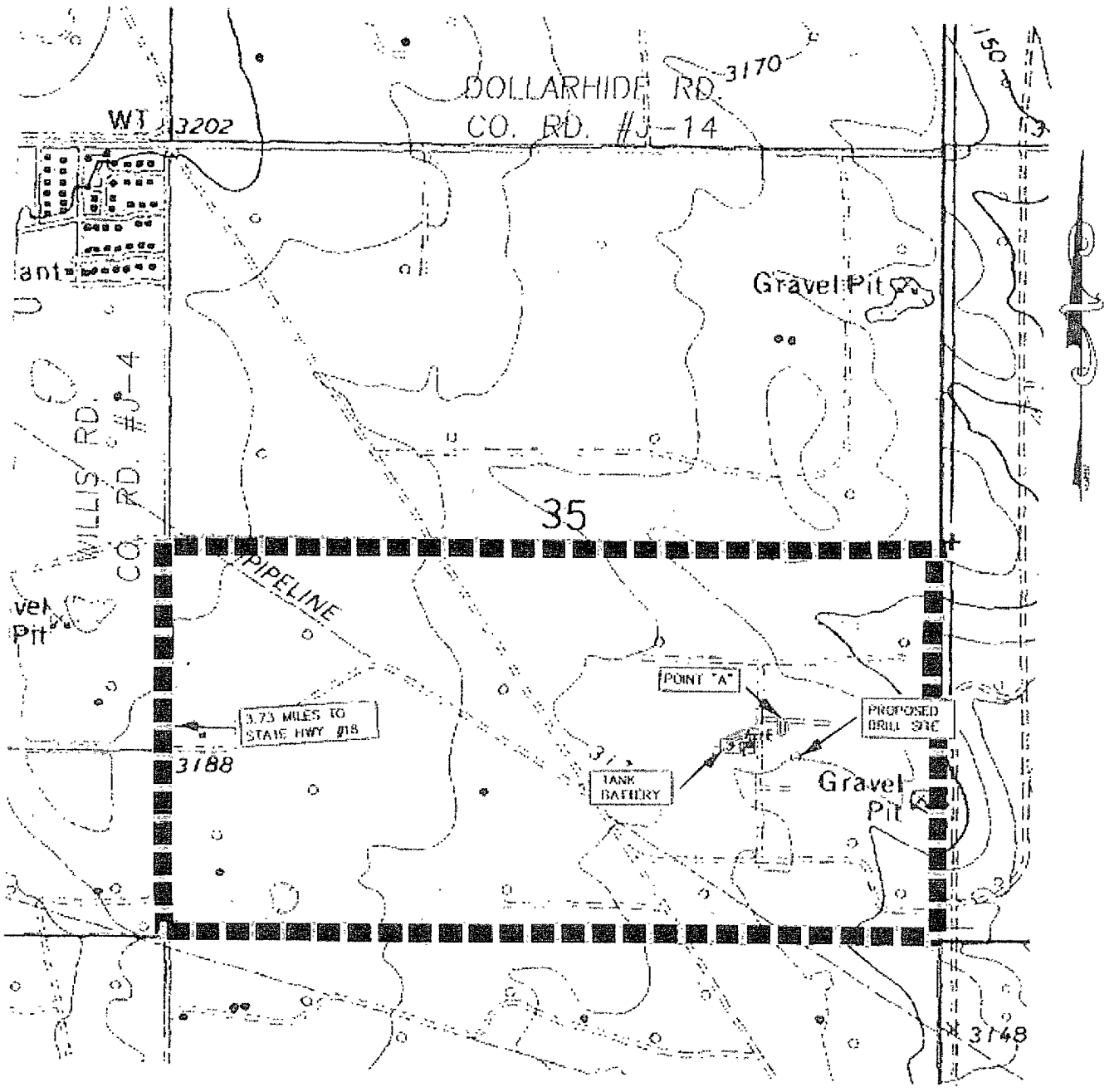
CHEVRON

8-5/8" X 5-1/2" X 2-7/8" OD, 3,000 PSI ASSY

SP-5889



Vetco Gray™ Technology at Work vetco



LEGEND OF SYMBOLS

- RESOURCE ROAD FEDERAL (RED)
- RESOURCE ROAD ON LEASE (YELLOW)
- PLANNED RESOURCE ROAD (BLUE)
- PLANNED FLOWLINE (GREEN)
- LEASE BOUNDARY
- PRODUCING WELL
- STAKED WELL
- TANK BATTERY

CHEVRON U.S.A. INC.

EXHIBIT "A"
C.L. ERWIN B FEDERAL "NCT-2" #14
SECTION 35, TOWNSHIP 24 SOUTH, RANGE 37 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 3/12/08		Sheet 1 of 1 Sheets	
W.O Number: 08.13.0436		Drawn By: L.A.	
Date: 3/27/08		08130436	

OPERATOR – LANDOWNER AGREEMENT

Company: *CHEVRON U.S.A. INC.*

Proposed Well : *G.L. ERWIN B FEDERAL NCT-2 #14*
Federal Lease No: *NMLC 057509*

This is to advise that Chevron U.S.A. Inc. has an agreement with:

WILLIS FAMILY TRUST
P.O. BOX 307
JAL, NEW MEXICO 88252

Attn: George Willis
(575) 395-3434

The surface owner, concerning entry and surface restoration after completion of drilling operations at the above described well.

After abandonment of the well, all pits will be filled & leveled; all equipment and trash will be removed from well site. No other requirements were made concerning restoration of the well site.

04-02-2008

Denise Pinkerton

Denise Pinkerton
Regulatory Specialist
Chevron U.S.A. Inc.
Midland, Texas 79705

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Chevron USA Inc.
LEASE NO.:	NMLC057509
WELL NAME & NO.:	G. L. Erwin B Federal NCT-2 No. 14
SURFACE HOLE FOOTAGE:	1225' FSL & 1015' FEL
BOTTOM HOLE FOOTAGE	Same
LOCATION:	Section 35, T. 24 S., R 37 E., NMPM
COUNTY:	Lea 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. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (505) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

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

C. RESERVE PITS

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

D. FEDERAL MINERAL MATERIALS PIT

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

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. 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.

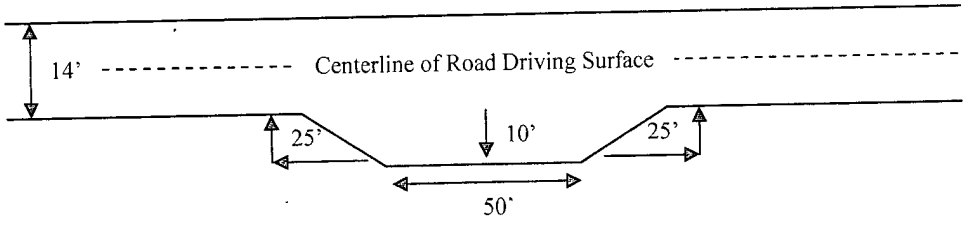
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

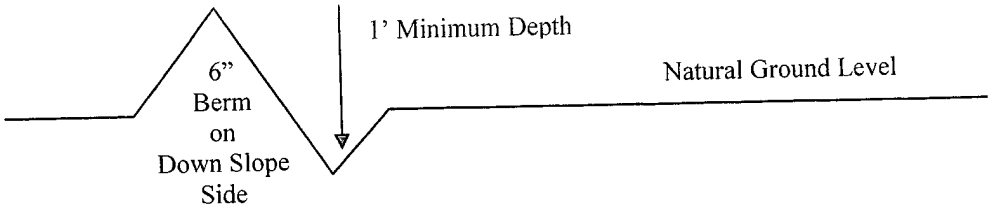
Standard Turnout – Plan View



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:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ 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.

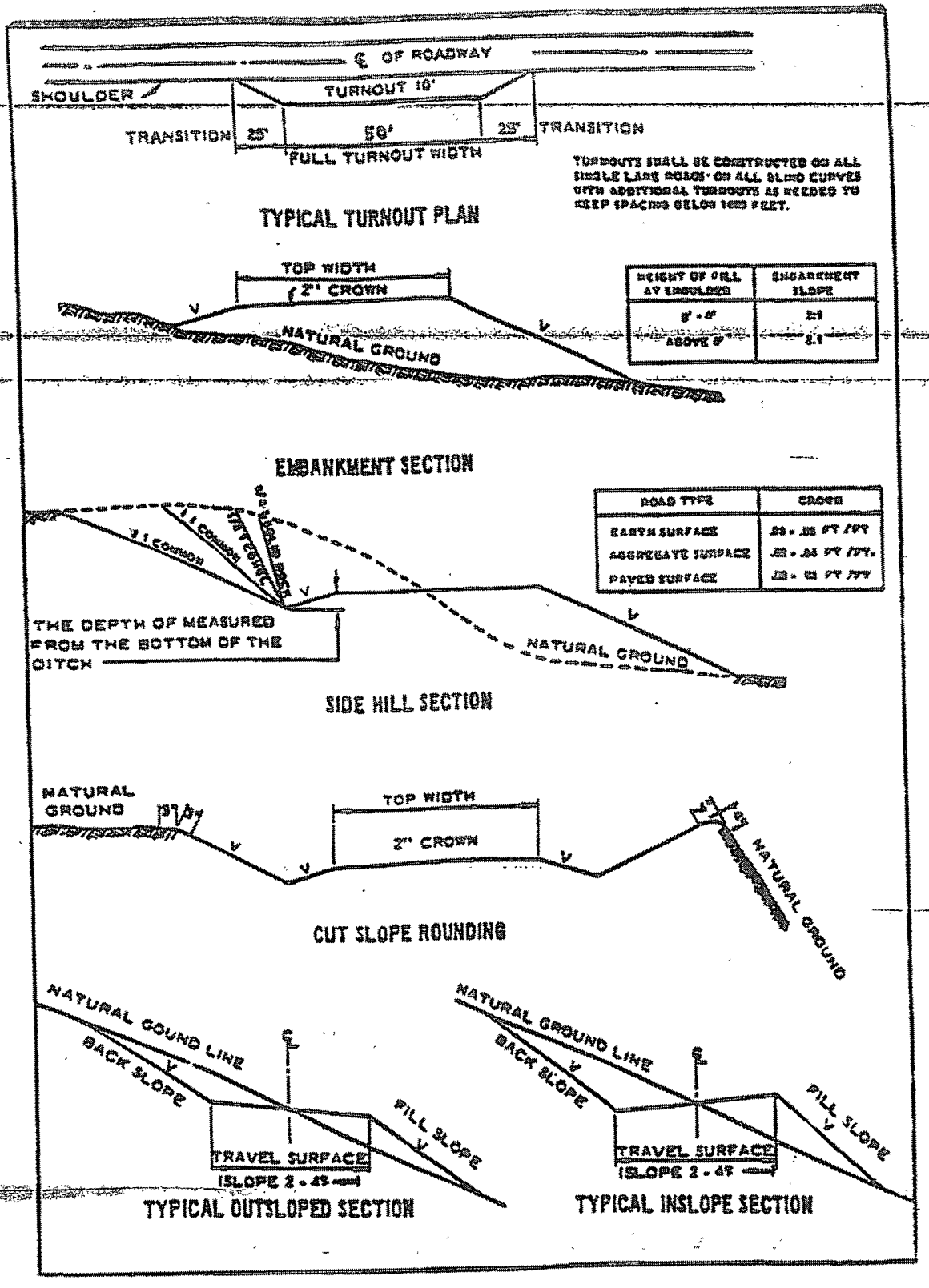
Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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



VI. 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. BOP/BOPE tests

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

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Yates** formation. **Hydrogen Sulfide has been measured at 1400 – 16650 ppm in gas streams and 350 ppm in STVs. 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.

B. CASING

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

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

Possible lost circulation in the Yates formation.

1. The **8-5/8** inch surface casing shall be set at **approximately 975 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.

   Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing

   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.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

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

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

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17. **BOP/BOPE to be tested per Onshore Order 2.III.A.2.i. during normal drilling operations. Operator is installing a 3M, but testing to 2M standards.**

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

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

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

   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

VII. 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

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the

Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, ~~where appropriate, the aquatic environment and fish and wildlife habitats,~~ at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 25 feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object)

discovered by the holder, or any person working on his hehalf, on public or Federal land shall be immediately reported to the authorized officer. Holder 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 will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

(March 1989)

VIII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

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

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Seed Mixture 1, for Loamy 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 bye the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper 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 (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

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

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

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

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