DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980
DISTRICT II
P.O. Box Drawer DD, Artesia, NM 88211-0719
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
P.O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-101
Revised February 10,199
Instructions on bac
Submit to Appropriate District Offic
State Lease - 6 Copie
Fee Lease - 5 Copie
☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1 Operator Name and Address	2 OGRID Number
CHEVRON USA INC 15 SMITH ROAD, MIDLAND, TX 79705	4323
	3 API Number 30-025-06705

4 Property Code	5 Property Name	6 Well No.
2634	C. L. HARDY	4

7 Surface Location

Ul or lot no.	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
M	20	21-S	37-E		660'	SOUTH	660'	WEST	LEA

8 Proposed 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

9 Proposed Pool 1	10 Proposed Pool 2
PENROSE SKELLY GRAYBURG	

11 Work Type Code	12 WellType Code	13 Rotary or C.T.	14 Lease Type Code	15 Ground Level Elevation
P	O	ROTARY	P	3494'
16 Multiple	**17 Proposed Depth**	**18 Formation**	**19 Contractor**	**20 Spud Date**
No	6670'	GRAYBURG		10/15/2003

21 Proposed Casing and Cement Program

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zoneand proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

CHEVRON U.S.A. INTENDS TO RECOMPLETE THE SUBJECT WELL TO THE GRAYBURG RESERVOIR IN THE PENROSE SKELLY FIELD.

THE INTENDED PROCEDURE AND WELL BORE DIAGRAMS IS ATTACHED FOR YOUR APPROVAL.

RECEIVED
OCT 2003
Hobbs OCD

Permit Expires 1 Year From Approval Date Unless ~~Drilling~~ Underway
Plug-Back

23 I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature Denise Leake

Printed Name Denise Leake

Title Regulatory Specialist

Date 10/1/2003 Telephone 915-687-7375

OIL CONSERVATION DIVISION

Approved By:

Title: PETROLEUM ENGINEER

Approval Date: OCT 07 2003 Expiration Date:

Conditions of Approval:
Attached ☐

DeSoto/Nichols 3-94 ver 1.10

C. L. Hardy # 4
Penrose Skelly Field
T21S, R37E, Section 20
Job: PB To Grayburg Formation, Acidize, And Frac

Procedure:

1. Displace flowline with fresh water. Have field specialist close valve at header. Pressure line according to the type of line. AGU, EMSU, and EMSUB buried fiberglass lines will be tested with 300 psi. All polypipe (SDR7 and SDR11) will be tested w/100 psi. All steel lines will be tested w/500 psi. If a leak is found, contact Larry Williams for repair/replacement. If test is good, bleed off pressure and **open valve** at header. Document this process in the morning report.

2. MI & RU pulling unit. Bleed pressure from well, if any. Pump down csg with 8.6 PPG cut brine water, if necessary to kill well. POH with rods and pump. Remove WH. Install BOP's and test to 1000 psi. Release TAC. POH with 2 3/8" tbg string.

3. PU and GIH with 6 ¼" MT bit and 2 7/8" work string to 5150'. POH with work string and bit. LD bit.

4. PU and GIH with 7" RBP to 5100'. Set RBP at 5100'. Dump 20' 16/30 sand on top of RBP. PUH to 4500'. Let sand fall to top of RBP. Reverse circulate well clean from 4500' using 8.6 PPG cut brine water. Pressure test csg and RBP to 500 psi. POH with 2 7/8" work string. **Note: A slight pressure bleedoff may be experienced and is acceptable due to cmt sqzd perfs at 3698-3840'.**

5. MI & RU Baker Atlas electric line unit. Install lubricator and test to 1000 psi. GIH and conduct GR/CBL/CCL log from 5080' up to 2600'. POH. Inspect logs for good cement bond from approximately 4300' up to 3500'. If bond does not appear to be good across proposed completion interval, discuss with Engineering before proceeding. Cmt squeeze as necessary to obtain good cmt across completion interval. GIH with 4 ½" Predator slick casing guns and perforate from 3667-73', 3683-86', 3690-93', 3696-3700', 3709-13', 3716-20', 3724-30', 3744-48', 3760-64', 3780-83', 3792-98', 3806-10', 3816-20', 3834-40', 3848-52', and 3861-67' with 4 JSPF at 120 degree phasing, using 38 gram premium charges. POH. RD & release electric line unit. **Note: Correlate logs and run flat with Schlumberger Gamma Ray Neutron Log conducted 4/8/59.**

6. PU and GIH w/ 7" PPI pkr (with 10' element spacing) and SCV on 2 7/8" work string to approximately 3650'. Test tbg to 5500 psi while GIH.

7. MI & RU DS Services. Acidize perfs 3667-3867' with 3,200 gals anti-sludge 15% HCl acid * at a maximum rate **as shown below** and a maximum surface pressure of

3500 psi. Spot acid across perfs at beginning of each stage and let soak to lower breakdown pressure and prevent communication. Pump job as follows:

Interval	Amt. Acid	Max Rate	PPI Setting
3861-67'	200 gals	½ BPM	3859-69'
3848-52'	200 gals	½ BPM	3845-55'
3834-40'	200 gals	½ BPM	3832-42'
3816-20'	200 gals	½ BPM	3813-23'
3806-10'	200 gals	½ BPM	3803-13'
3792-98'	200 gals	½ BPM	3790-3800'
3780-83'	200 gals	½ BPM	3776-86'
3760-64'	200 gals	½ BPM	3757-67'
3744-48'	200 gals	½ BPM	3741-51'
3724-30'	200 gals	½ BPM	3722-32'
3716-20'	200 gals	½ BPM	3714-24'
3709-13'	200 gals	½ BPM	3704-14'
3696-3700'	200 gals	½ BPM	3694-3704'
3690-93'	200 gals	½ BPM	3686-96'
3683-86'	200 gals	½ BPM	3678-88'
3667-73'	200 gals	½ BPM	3665-75'

Displace acid with 8.6 PPG cut brine water -- do not overdisplace. Use a SCV to control displacement fluid. Record ISIP, 5 & 10 minute SIP's. RD and release DS services. **Note: Pickle tubing in 1 run of 500 gals acid, prior to acidizing perfs. Pickle acid is to contain only 1/2 gal A264 and 1 gal W53. Also, if communication occurs during treatment of any interval, monitor casing pressure and attempt to complete stage w/o exceeding 1000 psi csg pressure. If cannot, then move PPI to next setting depth and combine treatment volumes of the intervals.**

* Acid system is to contain:	1 GPT A264	Corrosion Inhibitor
	8 GPT L63	Iron Control Agent
	2 PPT A179	Iron Control Aid
	20 GPT U66	Mutual Solvent
	2 GPT W53	Non-Emulsifier

8. Release PPI pkr and PUH to approximately 3650'. Swab back all intervals together. Recover 100% of treatment and load volumes before shutting well in for night, if possible. Report recovered fluid volumes, pressures, and/or swabbing fluid levels. **Note: Selectively swab perfs as directed by Engineering if excessive water is produced.**

9. Open well. Release PPI pkr. POH with tbg and PPI packer. LD PPI tool.

10. PU and GIH w/ 7" Lok-Set pkr & On-Off tool w/ 2.25" "F" profile and 118 jts. of 3 ½" EUE 8R L-80 work string, testing to 7500 psi. Set pkr at approximately 3550'.

Install frac head. Pressure annulus to 500 psi to test csg and pkr. Leave pressure on csg during frac job to observe for communication.

11. MI & RU DS Services and Cardinal Surveys. Frac well down 3 ½" tubing at **40 BPM** with 66,000 gals of YF135, 138,000 lbs. 16/30 mesh Jordan Sand, and 30,000 lbs **resin-coated** 16/30 mesh CR4000 proppant. Observe a maximum surface treating pressure of **7400 psi.** Tag frac with 2 radioactive isotopes (1 in main proppant body and 1 in resin-coated stage). Pump job as follows:

    Pump 2,000 gals 2% KCL water containing 110 gals Baker SCW-358 Scale Inhibitor
    Pump 1,000 gals 2% KCL water spacer
    Pump 25,000 gals YF135 pad containing 5 GPT J451 Fluid Loss Additive
    Pump 5,000 gals YF135 containing 1.5 PPG 16/30 mesh Jordan Sand
    Pump 6,000 gals YF135 containing 2.5 PPG 16/30 mesh Jordan Sand
    Pump 7,000 gals YF135 containing 3.5 PPG 16/30 mesh Jordan Sand
    Pump 8,000 gals YF135 containing 4.5 PPG 16/30 mesh Jordan Sand
    Pump 10,000 gals YF135 containing 5.5 PPG 16/30 mesh Jordan Sand
    Pump 5,000 gals YF135 containing 6 PPG **resin-coated** 16/30 mesh CR4000 proppant

    Flush to 3625' with 1,421 gals WF135. **Do not overflush.** Shut well in. Record ISIP, 5, 10, and 15 minute SI tbg pressures. SWI. RD & Release DS Services and Cardinal Surveys. **Leave well SI overnight.**

12. Open well. GIH and swab well until there is no sand inflow. MI & RU Cardinal Surveys electric line unit. Install lubricator and test to 1000 psi. GIH and conduct after-frac GR/Temp/CCL log from 4600' up to 3200'. POH. RD & release electric line unit. **Note: Correlate logs and run flat with Baker Atlas GR/CBL/CCL Log conducted in Step # 5.**

13. Release pkr and POH with 3 ½" work string. Lay down work string and pkr.

14. PU and GIH w/ BP mud anchor jt of 2 7/8" tbg, 2 7/8" x 4' perforated sub, SN, 1 jt 2 7/8" EUE 8R J-55 IPC tbg, 10 jts 2 7/8" EUE 8R J-55 tbg, TAC, and 117 jts 2 7/8" EUE 8R J-55 tbg, testing to 5000 psi. Set TAC at 3625', with EOT at 4000' and SN at 3965'.

15. Remove BOP's and install WH. GIH with rods, weight bars, and pump per ALS recommended design. RD & release pulling unit.

16. Turn well over to production. Report producing rates, choke sizes, flowing pressures and/or fluid levels.

AMH
7/3/2003

WELL DATA SHEET

FIELD: Penrose Skelly

FORMATION: Grayburg
LOC: 660' FSL & 660' FWL
TOWNSHIP: 21S
RANGE: 37E

SEC: 20
COUNTY: Lea
STATE: NM
LOT: M

WELL NAME: C. L. Hardy #4

GL: 3494'
KB:
DF:

PROPOSED STATUS:
API NO: 30-025-06705
REFNO: FA7806
Spud Date: 6/20/48
Date Completed: 8/4/48
SAP: UCU493600

PROPOSED

Surface Casing
13-3/8", 48#, H-40 casing
17-1/2" hole
Set @ 290' w/300 sx cmt
Circ cmt to surface

Initially completed as Drinkard OH completion
Later dually produced in the
Penrose Skelly and the Paddock

TOC @1315'

Intermediate Casing
9-5/8", 36#, H-40 casing
12-1/4" hole
Set @ 2913' w/1300 sx cmt
TOC @ 1315' by TS

TOC @ 2915'

Tbg Detail:
BP @ 4000'
1 jt. 2 7/8" EUE 8R J-55 tbg
2 7/8" x 4' perf sub
SN @ 3965'
1 jt. 2 7/8" EUE 8R J-55 IPC tbg
10 jts. 2 7/8" EUE 8R J-55 tbg
TAC @ 3625'
117 jts. 2 7/8" EUE 8R J-55 tbg

Perfs	Status
3698-3885'	Penrose Skelly - Open

PRTD 5080'

RBP @ 5100' w/ 2 sx sand on top

Perfs	Status
5162-70'	Paddock - squeezed

5219' sqzd to close off water

Perfs	Status
5570-5670'	Blinebry - open below RBP

PB 5695'

Baker pkr @ 5705'
w/ 2 sx cmt on top

Perfs	Status
5743-5857'	Blinebry - below cmt plug

Production Casing
7", 23#, J-55 casing
8-3/4" hole
Set @ 6563' w/700 sx cmt.
TOC @ 2915' by TS

CIBP @ 6550' w/ 2 sx cmt on top
OH Interval: 6-1/4" f/6563-6670'

TD 6670'

WELL DATA SHEET

FIELD: Blinebry Oil & Gas

WELL NAME: C. L. Hardy #4

FORMATION: Blinebry
LOC: 660' FSL & 660' FWL
TOWNSHIP: 21S
RANGE: 37E

SEC: 20
COUNTY: Lea
STATE: NM
LOT: M

GL: 3494'
KB:
DF:

CURRENT STATUS:
API NO: 30-025-06705
REFNO: FA7806
Spud Date: 6/20/48
Date Completed: 8/4/48
SAP: UCU461900

CURRENT

Surface Casing
13-3/8", 48#, H-40 casing
17-1/2" hole
Set @ 290' w/300 sx cmt
Circ cmt to surface

Initially completed as Drinkard OH completion
Later dually produced in the
Penrose Skelly and the Paddock

TOC @1315'

Intermediate Casing
9-5/8", 36#, H-40 casing
12-1/4" hole
Set @ 2913' w/1300 sx cmt
TOC @ 1315' by TS

TOC @ 2915'

Tbg Detail:
BP @ 5641'
1 jt. 2 3/8" EUE 8R J-55 tbg
2 3/8" x 4' perf sub
SN @ 5603'
1 jt. 2 3/8" EUE 8R J-55 IPC tbg
3 jts. 2 3/8" EUE 8R J-55 tbg
TAC @ 5475'
176 jts. 2 3/8" EUE 8R J-55 tbg

Perfs	Status
3698-3840'	Penrose Skelly - squeezed w/150 sx cmt

Perfs	Status
5162-70'	Paddock - squeezed

5219' sqzd to close off water

Perfs	Status
5570-5670'	Blinebry - open

PB 5695'

Baker pkr @ 5705'
w/ 2 sx cmt on top

Perfs	Status
5743-5857'	Blinebry - below cmt plug

Production Casing
7", 23#, J-55 casing
8-3/4" hole
Set @ 6563' w/700 sx cmt.
TOC @ 2915' by TS

CIBP @ 6550' w/ 2 sx cmt on top
OH Interval: 6-1/4" f/6563-6670'

TD 6670'