

County - ea Pool South Hardy-Strawn

TOWNSHIP		20 South		Range 37 East		NMPM	
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	28	27	26	25		
31	32	33	34	35	36		

Description: NE 1/4 Sec. 36 (R-11183, 5-19-99)
Redesignate as North Hardy-Strawn Pool (R-11203, 6-14-99)
Ext. NE 1/4 and SE 1/4 Sec. 25 (K-11533, 2-8-01)

County - ea Pool North Hardy-Strawn

TOWNSHIP		20 South		Range 38 East		NMPM	
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	28	27	26	25		
31	32	33	34	35	36		

Ext. NE 1/4 Sec. 30, NW 1/4 Sec. 31 (R-11304, 1-12-00) Ext. SW 1/4 Sec. 31 (K-11475, 10-20-00)

CMD :
OG5SECTONGARD
INQUIRE LAND BY SECTION03/07/01 08:37:35
OGOMES -TPZI
PAGE NO: 1

Sec : 36 Twp : 20S Rng : 37E Section Type : NORMAL

D 40.00 CS B11300 0004 CONOCO INC U 06/10/54 A P	C 40.00 CS B02366 0011 CONOCO INC U 01/11/39 A P	B 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A A	A 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A
E 40.00 CS E05376 0001 CONOCO INC U 07/10/61 A A	F 40.00 CS E05376 0001 CONOCO INC U 07/10/61 A C	G 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A	H 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A

PF01 HELP
PF07 BKWDPF02
PF08 FWDPF03 EXIT
PF09 PRINTPF04 GoTo
PF10 SDIVPF05
PF11PF06
PF12

CMD :
OG5SECTONGARD
INQUIRE LAND BY SECTION03/07/01 08:37:49
OGOMES -TPZT
PAGE NO: 2

Sec : 36 Twp : 20S Rng : 37E Section Type : NORMAL

L 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A A	K 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A A A	J 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A A	I 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A C
M 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A	N 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A	O 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A A	P 40.00 CS B02656 0000 CONOCO INC U 09/25/38 A C

PF01 HELP
PF07 BKWDPF02
PF08 FWDPF03 EXIT
PF09 PRINTPF04 GoTo
PF10 SDIVPF05
PF11PF06
PF12

Facilities Data Dictionary Actions Exit Help

 New Table - Data Table (DB2)TOBEDEL

19 COPY

 IN 77 Rows - Data Table (AS)#CORR001

 OUT 77 Rows - Data Table (DB2)TOBEDEL

20 * WHEN THIS COMPLETES SUCCESSFULLY, GO TO QMF TO RUN QDELETE QUERIES

 End line 20 - Pro Table (AS)OGOJEP.TRSH/PPEWEEKLY

? end now

1 Help

2 Run

3

4 Print

5 Recall

6 Toggle

7 Up

8 Down

9

10

11 Select

12 Command



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

May 23, 2000

Conoco, Inc.
10 Desta Drive – Suite 100W
Midland, Texas 79705-4500
Attention: Kay Maddox

Telefax No. (915) 686-5780

Administrative Order NSL-4450
And
AMENDED Administrative Order NSL-4412

Dear Ms. Maddox:

Reference is made to your applications dated April 24 and 25, 2000 for exceptions to **Rule 4** of the "Temporary Special Pool Rules for the North Hardy-Strawn Pool," as promulgated by New Mexico Oil Conservation Division ("Division") Order No. R-11221, issued in Case No. 12182 and dated July 12, 1999:

(i) for Conoco, Inc.'s ("Conoco") proposed State "KL" 36-Well No. 29 (API No. 30-025-34999) to be drilled at an unorthodox oil well location within a standard 160-acre oil spacing and proration unit comprising the NW/4 of Section 36, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, 330 feet from the North line (which is 50% closer to the north line of this well's proposed unit then allowed) and 2310 feet from the West line (which is also 50% closer to the east line of this well's proposed unit then allowed) (Unit C) of Section 36; and

(ii) to amend Division Administrative Order NSL-4412, dated February 18, 2000, which order authorized Conoco to drill its State "25-A" Well No. 3 (API No. 30-025-34953) at an unorthodox oil well location within a standard 160-acre oil spacing and proration unit comprising the SW/4 of Section 25, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, 510 feet from the South line and 1980 feet from the West line (Unit N) of Section 25, to accommodate a move of this location 376 feet southeast to a more unorthodox oil well location within this 160-acre unit.

Both of the above-described 160-acre units are within the governing limits of the North Hardy-Strawn Pool and both applications have been duly filed under the provisions of Division Rule 104.F, revised by Division Order No. R-11231, issued by the New Mexico Oil Conservation Commission in Case No. 12119 on August 12, 1999, and the applicable provisions of the rules governing this pool.

Administrative Order NSL-4450
And Amended Administrative Order NSL-4412
Conoco Inc.
May 23, 2000
Page 2

These applications are based on a 3-D seismic survey of the immediate area and by well control from recent drilling activity, which indicates that a well drilled at this location will be at a more favorable geologic position within the Undesignated North Hardy-Strawn Pool underlying both 160-acre units.

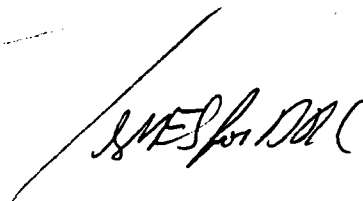
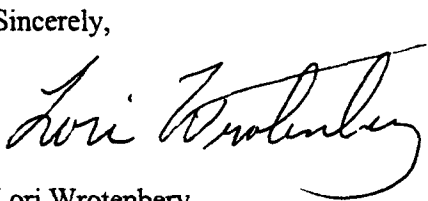
By the authority granted me under the provisions of: (i) Rule 5 of these special pool rules; and (ii) Division Rule 104.F (2);

(i) the unorthodox oil well location within the standard 160-acre oil spacing and proration unit comprising the NW/4 of Section 36, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, for the Undesignated North Hardy-Strawn Pool for Conoco's proposed State "KL" 36 Well No. 29 is hereby approved; and

(ii) Division Administrative Order NSL-4412 is hereby amended to reflect a location change for Conoco's proposed State "25-A" Well No. 3 in the SW/4 of Section 25, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, to be drilled an unorthodox gas well location that is 330 feet from the South line and 2310 feet from the West line (Unit N) of Section 25.

Further, all other provisions of Division Administrative Order NSL-4412 shall remain in full force and effect until further notice.

Sincerely,



Lori Wrotenbery
Director

LW/MES/kv

cc: New Mexico Oil Conservation Division - Hobbs
New Mexico State Land Office - Santa Fe
File: Case No. 12182
W. Thomas Kellahin, Legal Counsel for Conoco, Inc. - Santa Fe

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-105
Revised March 25, 1999

WELL API NO.

30 025 34999

5. Indicate Type of Lease

STATE ☒ FEE ☐

State Oil & Gas Lease No. B2366

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:

OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER

b. Type of Completion:

NEW ☐ WORK ☐ PLUG ☐ DIFF. ☐ P & A
WELL ☐ OVER ☐ DEEPEN ☐ BACK ☐ RESVR. ☐ OTHER

2. Name of Operator

Conoco, Inc.

7. Lease Name or Unit Agreement Name

State "KL" 36

3. Address of Operator

10 Desta Dr., Suite 100W, Midland, TX 79705

8. Well No.

29

9. Pool name or Wildcat

North Hardy Strawn

4. Well Location

Unit Letter C 330 Feet From The North Line and 2310 Feet From The West Line

Section 36 Township 20S Range 37E NMPM Lea County

10. Date Spudded

7-6-00

11. Date T.D. Reached

7-24-00

12. Date Compl. (Ready to Prod.)

P & A-7/24-25-00

13. Elevations (DF& RKB, RT, GR, etc.)

3504'

14. Elev. Casinghead

15. Total Depth

7921'

16. Plug Back T.D.

17. If Multiple Compl. How Many Zones?

18. Intervals Drilled By

Rotary Tools

X

Cable Tools

19. Producing Interval(s), of this completion - Top, Bottom, Name

20. Was Directional Survey Made

side wall

21. Type Electric and Other Logs Run

GR/CFL/FMI/

22. Was Well Cored

no

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24#	1525'	12 1/4"	656 SX	none

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number)

none

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED

28. PRODUCTION

Date First Production

Production Method (Flowing, gas lift, pumping - Size and type pump)

Well Status (Prod. or Shut-in)

P & A

Date of Test

Hours Tested

Choke Size

Prod'n For Test Period

Oil - Bbl

Gas - MCF

Water - Bbl

Gas - Oil Ratio

Flow Tubing Press.

Casing Pressure

Calculated 24-Hour Rate

Oil - Bbl

Gas - MCF

Water - Bbl

Oil Gravity - API - (Corr.)

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

30. List Attachments

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

Signature

Printed

Name Ann E. Ritchie

Title Regulatory Agent

Date 9-20-00

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

T. Anhy	T. Canyon
T. Salt	T. Strawn 7583
B. Salt	T. Atoka
T. Yates 2708	T. Miss
T. 7 Rivers 2959	T. Devonian
T. Queen 3521	T. Silurian
T. Grayburg 3780	T. Montoya
T. San Andres 4007	T. Simpson
T. Glorieta 5256	T. McKee
T. Paddock	T. Ellenburger
T. Blinebry 5850	T. Gr. Wash
T. Tubb 6351	T. Delaware Sand
T. Drinkard 6667	T. Bone Springs
T. Abo 6936	T.
T. Wolfcamp	T.
T. Penn	T.
T. Cisco (Bough C)	T.

Northwestern New Mexico

T. Ojo Alamo	T. Penn. "B"
T. Kirtland-Fruitland	T. Penn. "C"
T. Pictured Cliffs	T. Penn. "D"
T. Cliff House	T. Leadville
T. Menefee	T. Madison
T. Point Lookout	T. Elbert
T. Mancos	T. McCracken
T. Gallup	T. Ignacio Otzte
Base Greenhorn	T. Granite
T. Dakota	T.
T. Morrison	T.
T. Todilto	T.
T. Entrada	T.
T. Wingate	T.
T. Chinle	T.
T. Permian	T.
T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....
 No. 2, from.....to.....
 No. 3, from.....to.....
 No. 4, from.....to.....

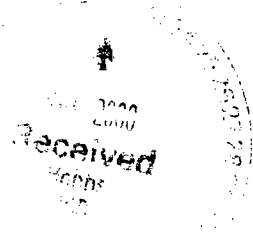
IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
1280			Rustler				
2708			Yates				
2959			Seven Rivers				
3521			Queen				
3648			Penrose				
3780			Grayburg				
4007			San Andres				
5256			Glorieta				
5850			Blinebry Mkr				
6351			Tubb Mkr				
6667			Drinkard				
6936			Abo				
7583			Strawn				



Conoco, Inc.

P.O. Box 953

Midland, Texas 79702

State KL-36 # 29

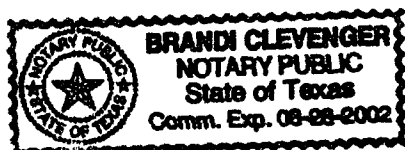
Lea County, New Mexico

Unit C 36-20s-37e
330/W & 2310/W
30-025-34999

460	4.60	1/2	0.88	4.03	4.03
1018	5.58	1/2	0.88	4.88	8.91
1525	5.07	1/2	0.88	4.44	13.34
1945	4.20	1/2	0.88	3.68	17.02
2440	4.95	2 1/4	3.94	19.49	36.51
2784	3.44	1 1/4	2.19	7.53	44.03
3287	5.03	1	1.75	8.80	52.84
3783	4.96	1	1.75	8.68	61.52
4284	5.01	3/4	1.31	6.58	68.09
4784	5.00	3/4	1.31	6.56	74.66
5190	4.06	1	1.75	7.11	81.76
5696	5.06	1	1.75	8.86	90.62
6198	5.02	3/4	1.31	6.59	97.20
6680	4.82	1	1.75	8.44	105.64
7190	5.10	1 1/4	2.19	11.16	116.80
7687	4.97	1 1/4	2.19	10.87	127.67
7920	2.33	1 1/4	2.19	5.10	132.76


Michael Roghair - General Manager

The attached instrument was acknowledged before me on the 25th day of July, 2000 by Michael Roghair - General Manager, CapStar Drilling, Inc.




Notary Public

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

District I
P.O. Box 1980, Hobbs, NM 88240
District II
P.O. Drawer DD, Artesia, NM 88210
District III
1000 Rio Brazos Rd, Aztec, NM 87410

OIL CONSERVATION DIVISION
310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87503

WELL API NO. 30 025 34999
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas No. B2366
7. Lease Name or Unit Agreement Name State "KL" 36
8. Well No. 29
9. Pool Name or Wildcat North Hardy Strawn
10. Elevation (Show whether DF, RKB, GR, etc.) 3504'

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	2. Name of Operator Conoco, Inc.
3. Address of Operator 10 Desta Dr., Suite 100W, Midland, TX 79705 (915) 684-6381 or 686-5580	4. Well Location Unit Letter C 330 Feet From The North Line and 2310 Feet From The West Line Section 36 Township 20S Range 37E NMPM Lea County

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PUUORALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
OTHER: <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
	CASING TEST AND CEMENT JOB <input checked="" type="checkbox"/>
	OTHER <u>Surface Commingling</u> <input checked="" type="checkbox"/>

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

7-6-00: Spudded well. Drilling 12 1/4" hole.

7-8-00: Ran 1525' of 8 5/8", 24#, J-55 casing with 14 centralizers. Cemented with 656 sx Cl C cement, circulated 78 sx to pit. WOC. Tested to 1500 psi.

I hereby certify that the above is true and complete to the best of my knowledge and belief.

SIGNATURE Ann E. Ritchie TITLE Regulatory Agent DATE 7-25-00

TYPE OR PRINT NAME Ann E. Ritchie TELEPHONE NO. 915 684-6381/686-5580

(This space for State Use)

Chris Williams

DISTRICT SUPERVISOR

DATE JUL 31 2000

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C103
Revised 1-1-89

DISTRICT I

P. O. Box 1980, Hobbs, NM 88240

P.O. Drawer DD, Artesia, NM 88210

DISTRICT II

1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

WELL API NO.
30-025-34999

5. Indicate type of Lease

STATE ☒ FEE ☐

6. State Oil & Gas Lease No

7. Lease Name or Unit Agreement Name

State "KL" 36

8. Well No.

29

9. Pool name or Wildcat

Hardy Strawn North

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR DEEPEN OR PLUG BACK TO
DIFFERENT RESERVOIR. USE APPLICATION FOR PERMIT
(FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well

Oil Well ☒

Gas Well ☐

Other ☐

2. Name of Operator

Conoco Inc.

3. Address of Operator

10 Desta Dr., Suite 649W, Midland, Texas 79705-4500

4. Well Location

Unit Letter C 330 Feet From The North Line and 2310 Feet From The West Line

Section 36 Township 20S Range 37E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.

3504'

Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENT TO:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

OTHER: Change type of cement

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐

ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐

PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

12. Describe proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Conoco Inc. proposes to change the type of cement used as per the attached Cement Plan.

*Btm 70% of casing must reach compressive strength
of 500psi in 8 hours. CW*

13. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Jo Ann Johnson

TITLE

Sr. Property Analyst

DATE 6/29/00

TYPE OR PRINT NAME

Jo Ann Johnson

TELEPHONE NO.

915-686-5515

(this space for State Use)

APPROVED BY

Chris Williams

TITLE

DISTRICT 1 CUSTOMER

DATE

JUN 30 5 2000

See note.

**State 'KL' 36 #29
Cement System Proposal**

8-5/8" surface
@ 1,500'

Original: **Lead:** 528 sx (35:65) Poz: Class C cement + 2% bwoc Calcium Chloride + 0.25 pps Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 96.5% fresh water.

Tail: 195 sx Class C cement + 2% bwoc Calcium chloride + 0.005 gps FP-6L + 56.3% fresh water.

New: **Lead:** 460 sx Class C + 0.25 pps Cello Flake + 0.005 gps FP-6L + 2% bwoc Sodium Metasilicate + 109.4% fresh water.

Tail: Same as original

New Lead Slurry properties:

Slurry weight: 12.4 ppg

Slurry yield: 2.15 cf/sx

Amount of mix water: 12.33 gps

Pump time: 6:25 hr:mins

Free water: 0

Compressive strength: 124 psi in 12 hrs and 250 psi in 24 hrs

5-1/2" production
casing @ 7,920'

Original: **Lead:** 718 sx (35:65) Poz: Class C
cement + 0.25 pps Cello Flake + 0.005 gps FP-6L
+ 6% bwoc Bentonite + 95.7% fresh water.

Tail: 465 sx Class C cement + 1% bwoc BA-58 +
2 pps Potassium Chloride + 0.4% bwoc CD-32 +
0.7% bwoc FL-52 + 0.005 gps FP-6L + 0.2% bwoc
sodium metasilicate + 56.2% fresh water.

New: **Lead:** 551 sx (50:50) Poz: Class C cement +
5% bwow Sodium Chloride + 0.25 pps Cello Flake
+ 0.005 gps FP-6L + 10% bwoc Bentonite +
136.9% fresh water.

Tail: 426 sx (15:61:11) Poz: Class C:CSE + 5%
bwow Sodium Chloride + 1% bwoc FL-62 +
0.005 gps FP-6L + 70% fresh water.

New Lead Slurry properties:

Slurry weight: 11.85 ppg

Slurry yield: 2.41 cf/sx

Amount of mix water: 13.79 gps

Pump time: 2:58 hr:mins

Free water: 1 mls

Fluid loss: 792 cc/30 min

Compressive strength: 50 psi in 12 hrs and 175 psi in 24 hrs

New Tail Slurry properties:

Slurry weight: 13.6 ppg

Slurry yield: 1.49 cf/sx

Amount of mix water: 7.31 gps

Pump time: 2:31 hr:mins

Free water: 0

Fluid loss: 62 cc/30 min

Compressive strength: 1013 psi in 12 hrs and 1877 psi in 24 hrs

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
Revised March 17, 1999

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Submit to appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

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

¹ Operator Name and Address Conoco Inc., 10 Desta Drive, Suite 649W, Midland, TX 79705		² OGRID Number 005073
		³ API Number 30-025-34999
³ Property Code +3396 25612	⁵ Property Name State "KL" 36	⁶ Well No. 29

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
C	36	20S	37E		330	North	2310	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 Hardy-Strawn North	¹⁰ Proposed Pool 2
--	-------------------------------

¹¹ Work Type Code N	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3504'
¹⁶ Multiple No	¹⁷ 8220'	¹⁸ Formation Strawn	¹⁹ Contractor	²⁰ Spud Date 4/15/00

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	J-55, 8-5/8"	24#	1500'	723	Surface
7-7/8"	J-55, 5-1/2"	17#	7920'	1183	Surface

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

- Well Location and Acreage Dedication Plat (C-102)
- Proposed Well Plan Outline
- Cementing Program
- BOP/Choke Diagram

Permit Expires 1 Year From Approval
Date Unless Drilling Underway

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Jo Ann Johnson*

Printed name: Jo Ann Johnson

Title: Sr. Property Analyst

Date: 4/5/00

Phone: 915/686-5515

OIL CONSERVATION DIVISION

Approved by:

Harry W. Wink

Title:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34999	Pool Code 96893	Pool Name North Hardy Strawn
Property Code 13396 25612	Property Name STATE "KL" 36	Well Number 29
OGRID No. 005073	Operator Name CONOCO INC.	Elevation 3504'

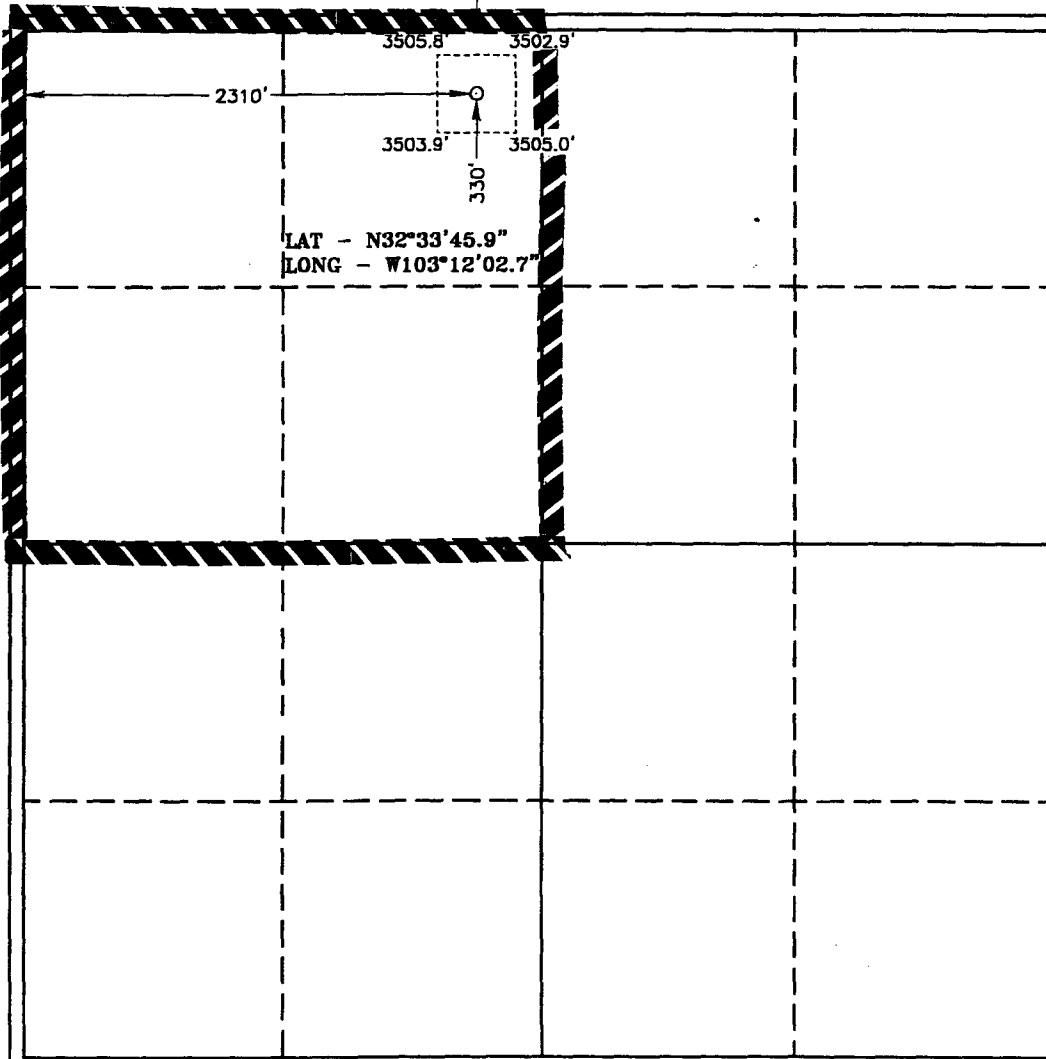
Surface Location

UL or lot No. C	Section 36	Township 20 S	Range 37 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 2310	East/West line WEST	County LEA
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Bottom Hole Location If Different From Surface

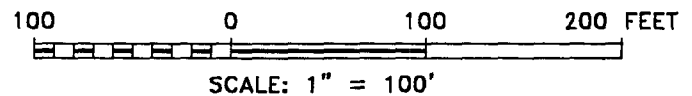
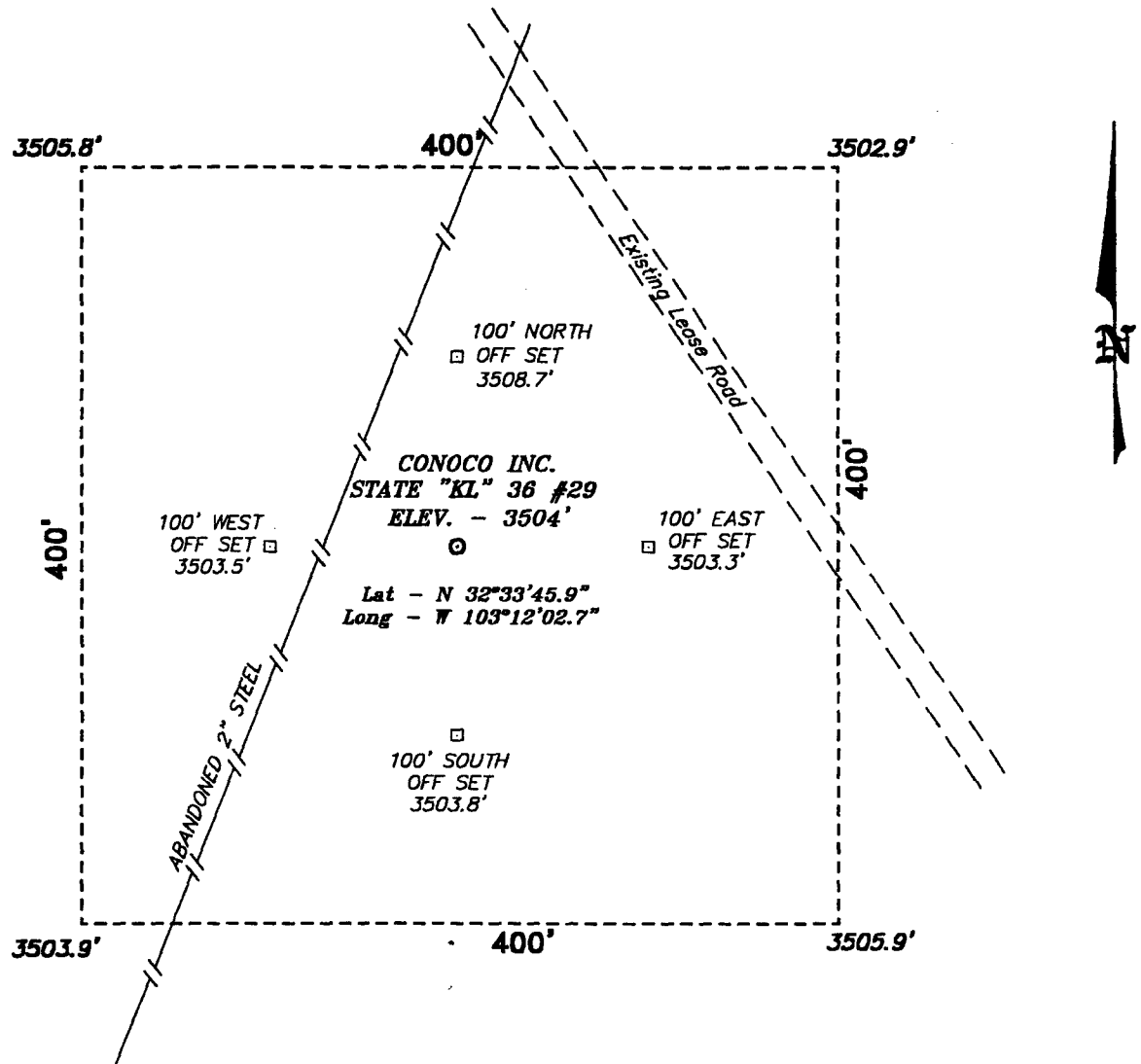
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No. NSL applied for						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION	
I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.	
<i>Jo Ann Johnson</i>	
Signature	Jo Ann Johnson
Printed Name	
Sr. Property Analyst	
Title	
April 5, 2000	
Date	
SURVEYOR CERTIFICATION	
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.	
March 30, 2000	
Date Surveyed	
Signature & Seal of Professional Surveyor	
W.Q. No. 01986	
Certificate No. Gary L. Jones 7977	
BASIN SURVEYS	

**SECTION 36, TOWNSHIP 20 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



DIRECTIONS TO WELL LOCATION:

FROM JUNCTION NORTH LOOP 18 AND STATE HWY. 18,
GO GO SOUTHWEST ON LOOP 18 APPROX. 3.5 MILES TO
COUNTY ROAD C-34; THENCE NORTHWEST ON C-34
APPROX. 4 MILES TO A POINT WHICH LIES APPROX. 1
MILE SOUTH OF THE PROPOSED WELL LOCATION.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 0198 Drawn By: K. GOAD

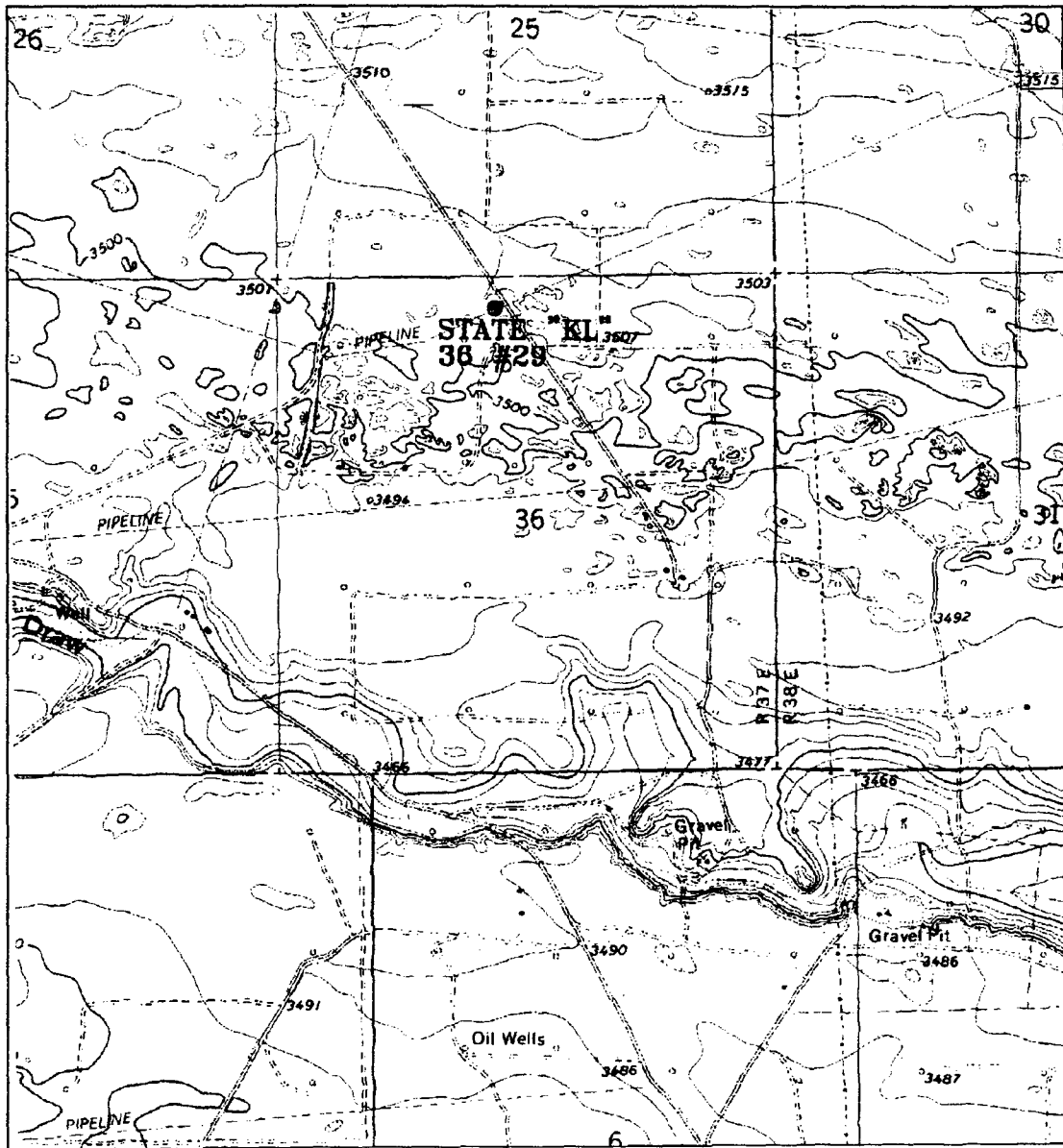
Date: 04-03-2000 Disk: KJG #122 - 0198A.DWG

Conoco Inc.

REF: STATE "KL" 36 No. 29 / Well Pad Topo

THE STATE "KL" 36 No. 29 LOCATED 330' FROM THE
NORTH LINE AND 2310' FROM THE WEST LINE OF
SECTION 36, TOWNSHIP 20 SOUTH, RANGE 37 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 03-30-2000 Sheet 1 of 1 Sheets



STATE "KL" 36 #29

Located at 330' FNL and 2310' FWL
 Section 36, Township 20 South, Range 37 East,
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

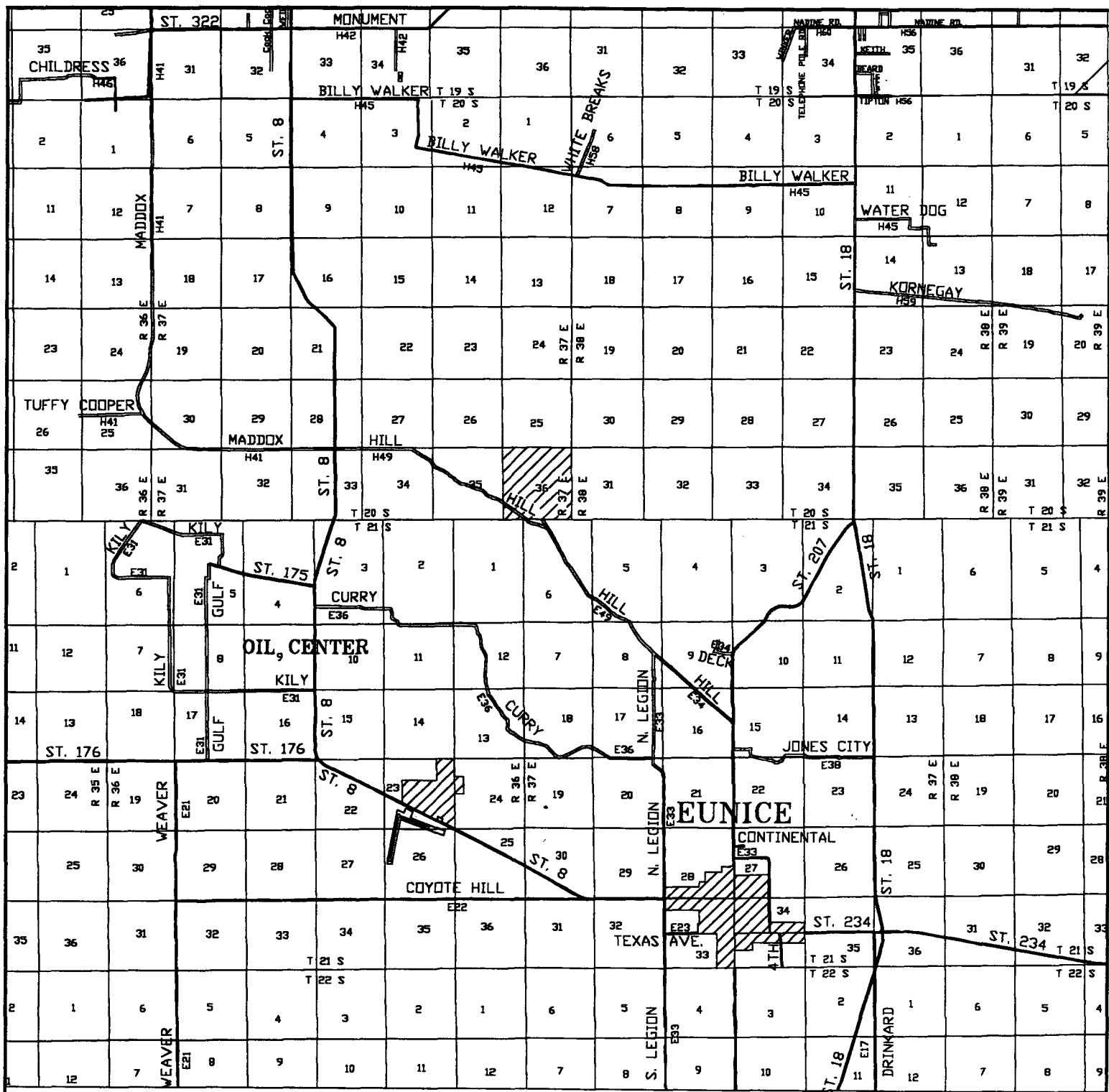
W.O. Number: 0198AA - KJG #122

Survey Date: 03-30-2000

Scale: 1" = 2000'

Date: 04-03-2000

CONOCO INC.



STATE "KL" 36 #29

Located at 330' FNL and 2310' FWL

Section 36, Township 20 South, Range 37 East,
N.M.P.M., Lea County, New Mexico.



focused on excellence
in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number: 0198AA - KJG #122

Survey Date: 03-30-2000

Scale: 1" = 2 MILES

Date: 04-03-2000

CONOCO INC.

PROPOSED WELL PLAN OUTLINE

WELL NAME
LOCATION

State "KL" 36 No.29
330' FNL & 2310' FWL Sec 36, T20S, R37E

Ground Level : 3516 est.
Kelly Bushing: 11' AGL

Depth MD	FORMATION TOPS	DRILLING PROBLEMS	TYPE OF FORMATION EVALUATION	HOLE SIZE	CASING PROGRAM	FRAC GRAD	FORM. PRES. GRAD.	Mud Weight & Type	Days
0		Possible Hole Enlargement & Sloughing		12-1/4"			Less than 8.3	8.4 - 9.5 Fresh	
1000					8-5/8", 24#, J-55 ST&C @ 1,500'				3
	Top Salt @ 1,300'	Washouts in Salt Section		7-7/8"	Circulate Cement			10 Brine	
2000							Less than 8.4		
	Base Salt @ 2,550'								
	Yates 2,680'								
	7 Rivers 2,960'		H2S Monitor on at 2,650'						
3000		Shallow gas flows in SEMU # 125 & 126 not expected at this location							
	Queen 3,535'								
	Penrose 3,655'								
	Grayburg 3,790'		Mud Log 3,776' to TD						
4000	San Andres 4,030'	Lost Returns in San Andres							7
5000									
	Glorietta 5,260'	Possible differential sticking thru Glorietta & Paddock							
	Blaine Mkr 5,811'								
6000									
	Tubb 6,335'								
	Drinkard 6,640'								
	Abo 6,930'		First Log Run: SGR-CAL-DLL-MLL-BHC FDC-CNL-PE : TD to 2650' Pull GR-CNL-Cal to Surf SGR from TD to 6400'						
7000			Second Log Run: 30 rotary sidewall cores						
	Strawn 7,570'		Third Run: FMI imaging log		5-1/2", 17.0#, J-55 LT&C f/O'-7,920'			10 ppg Starch Gel	20
8000	TD @ 7,920'	STOP DRILLING WHEN WOODFORD SHALE IS CUT Severe losses in Devonian			Circulate Cement				
	Devonian 8,050'								

Note: The Devonian formation is associated with severe lost circulation problems. This well will be TD'd very close to the top of the Devonian. The mud loggers will pick the Woodford shale which is about 40' thick and sits on top of the Devonian. Stop drilling once the Woodford is entered.

DATE 05-Apr-00

Joe Huck, Geophysical Advisor

APPROVED

Yong Cho, Drilling Engineer

Joe Miller, Reservoir Engineer

6



Proposal No: 180253437B

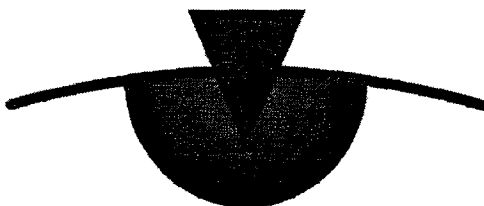
Conoco
State 'KL' 36 No. 29

Sec. 36-T20S-R37E
Lea County, New Mexico
April 5, 2000

Well Recommendation

Prepared for:
Yong Cho
Drilling Engineer

Prepared by:
Rocky Chambers
Region Engineer
Bus Phone: 915/683-2781
Mobile: 915/557-1239
Pager: 915/498-1605



POWERVISION™

Service Point:
Hobbs
Bus Phone: (505) 392-5556
Fax: (505) 392-7307

Service Representatives:
Wayne Davis
Account Manager
Bus Phone: (915) 683-2781
Fax: (915) 683-1443

Operator Name: Conoco
 Well Name: State 'KL' 36 No. 29
 Job Description: 8-5/8" Surface
 Date: April 5, 2000



Proposal No: 180253437B

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.250 HOLE	1,500	1,500

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
8.625	8.097	24	1,500	1,500

Float Collar set @ 1,460 ft
 Mud Density 9.00 ppg
 Est. Static Temp. 86 ° F
 Est. Circ. Temp. 85 ° F

VOLUME CALCULATIONS

1,200 ft	x	0.4127 cf/ft	with	100 % excess	=	988.9 cf
300 ft	x	0.4127 cf/ft	with	100 % excess	=	247.6 cf
40 ft	x	0.3576 cf/ft	with	0 % excess	=	14.3 cf (inside pipe)
TOTAL SLURRY VOLUME					=	1250.9 cf
					=	223 bbls

8

Operator Name: Conoco
Well Name: State 'KL' 36 No. 29
Job Description: 8-5/8" Surface
Date: April 5, 2000



Proposal No: 180253437B

FLUID SPECIFICATIONS

Spacer

1,000.0 gals Mud Clean I @ 8.4 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	989	/ 1.88	= 528 sacks (35:65) Poz (Fly Ash):Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 96.5% Fresh Water
Tail Slurry	262	/ 1.34	= 195 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.005 gps FP-6L + 56.3% Fresh Water

Displacement

93.0 bbls FRESH WATER

CEMENT PROPERTIES

SLURRY SLURRY NO. 1 NO. 2

Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.88	1.34
Amount of Mix Water (gps)	10.07	6.35
Amount of Mix Fluid (gps)	10.07	6.35

9

Operator Name: Conoco
Well Name: State 'KL' 36 No. 29
Job Description: 5-1/2" Long String
Date: April 5, 2000



Proposal No: 180253437B

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.097 CASING	1,500	1,500
7.875 HOLE	7,920	7,920

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
5.500	4.892	17	7,920	7,920

Float Collar set @ 7,880 ft
 Mud Density 8.70 ppg
 Est. Static Temp. 128 ° F
 Est. Circ. Temp. 121 ° F

VOLUME CALCULATIONS

1,500 ft	x	0.1926 cf/ft	with	0 % excess	=	288.9 cf
4,000 ft	x	0.1733 cf/ft	with	50 % excess	=	1039.5 cf
2,420 ft	x	0.1733 cf/ft	with	50 % excess	=	628.9 cf
40 ft	x	0.1305 cf/ft	with	0 % excess	=	5.2 cf (inside pipe)
TOTAL SLURRY VOLUME					=	1962.6 cf
					=	350 bbls

10

Operator Name: Conoco
Well Name: State 'KL' 36 No. 29
Job Description: 5-1/2" Long String
Date: April 5, 2000



Proposal No: 180253437B

FLUID SPECIFICATIONS

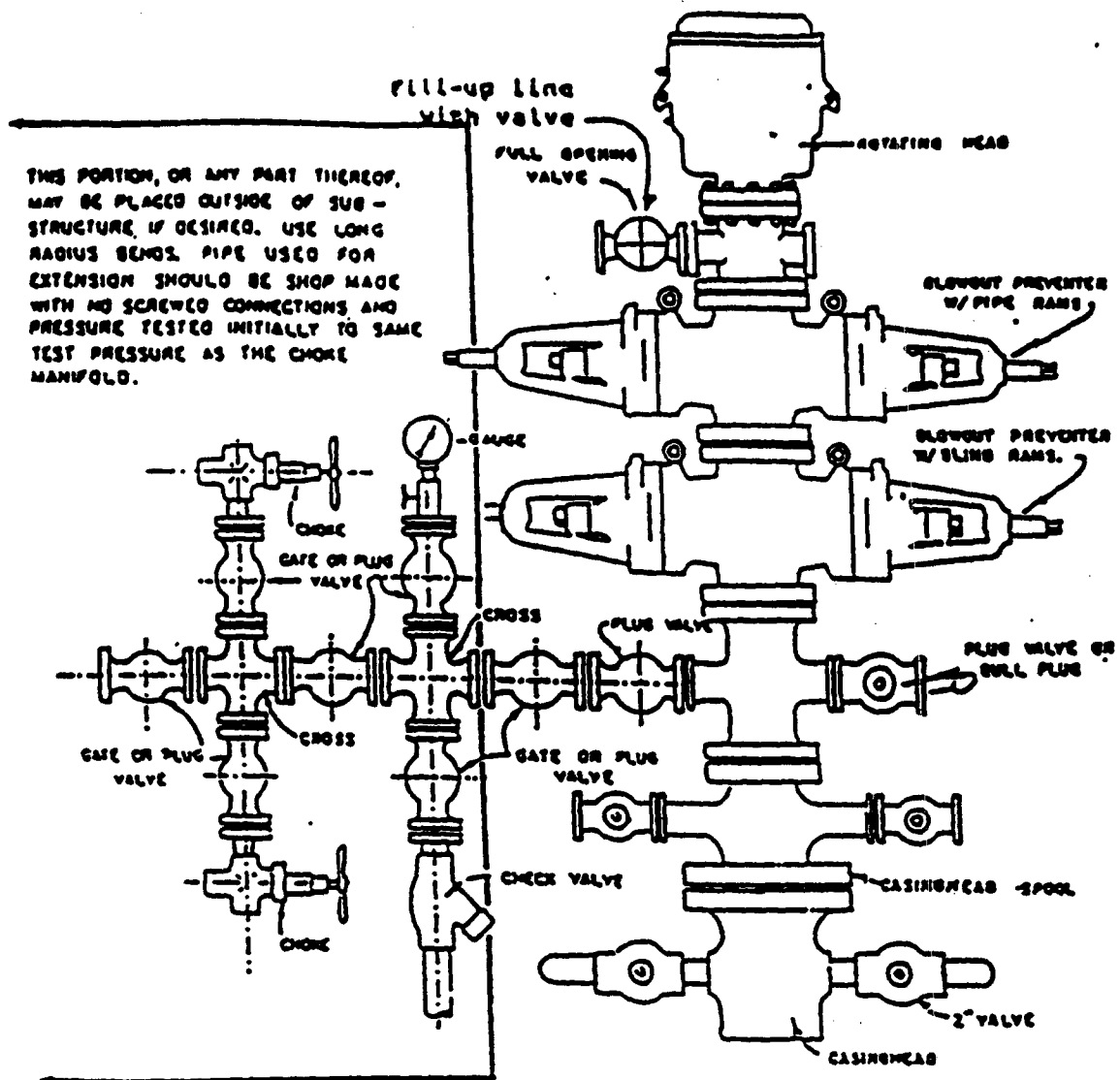
Spacer				1,500.0 gals Mud Clean I @ 8.4 ppg
<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>	
Lead Slurry	1328	/ 1.85	= 718 sacks (35:65) Poz (Fly Ash):Class C Cement + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 95.7% Fresh Water	
Tail Slurry	634	/ 1.36	= 465 sacks Class C Cement + 1% bwoc BA-58 + 2 lbs/sack Potassium Chloride + 0.4% bwoc CD- 32 + 0.7% bwoc FL-52 + 0.005 gps FP-6L + 0.2% bwoc Sodium Metasilicate + 56.2% Fresh Water	
Displacement				183.2 bbls FRESH WATER

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.85	1.36
Amount of Mix Water (gps)	9.98	6.34
Amount of Mix Fluid (gps)	9.99	6.34
Estimated Pumping Time - 70 BC (HH:MM)	2:19	2:30
Free Water (mls) @ 80 ° F @ 90 ° angle	2.0	0.0
Fluid Loss (cc/30min) at 1000 psi and 80 ° F	722.0*	98.0

RHEOLOGIES

<u>FLUID</u>	<u>TEMP</u>	<u>600</u>	<u>300</u>	<u>200</u>	<u>100</u>	<u>6</u>	<u>3</u>
Lead Slurry	@ 80 ° F	102	92	88	84	40	25
Tail Slurry	@ 80 ° F	300	250	185	110	12	7

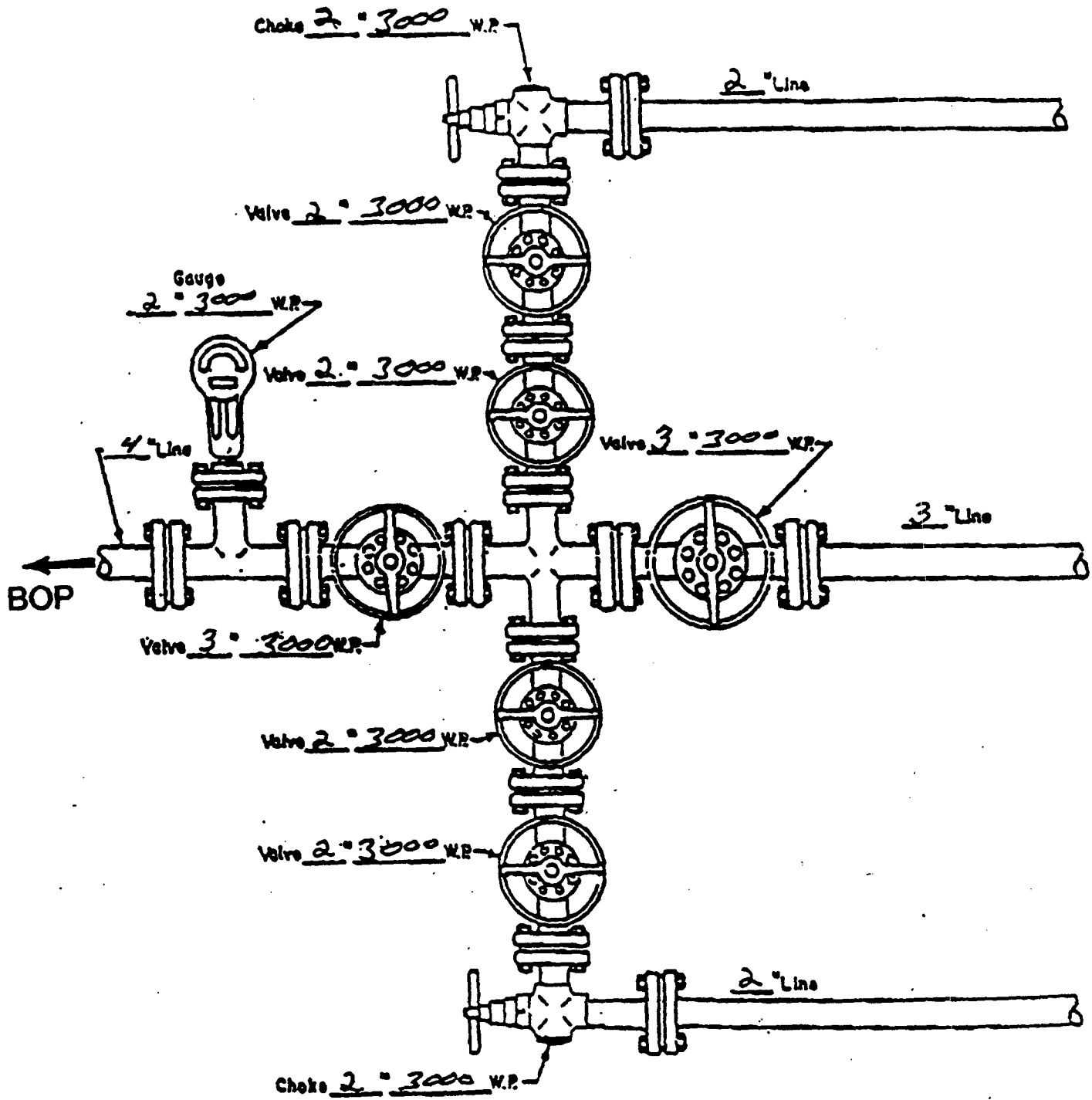


BLQWOUT PREVENTER HOOKUP

Drilling contractors used in the San Juan Basing supply 3000 psi equipment, but cannot provide annular preventors because of sub-structure limitations. Maximum anticipated surface pressures for this well will not exceed the working pressure of the proposed BOP system. Please see the attached BOP diagram details 2000 psi equipment according to Onshore Order No. 2 even though the equipment will test to 3000 psi. The 2000 psi system allows deletion of the annular preventor and fulfills your requirements (note diagram No. 1). In addition, the following equipment will comprise the 2000 psi system:

1. Two rams with one blind and one pipe ram.
2. Kill line (2 inch maximum).
3. One kill line valve.
4. One choke line valve.
5. Two chokes (reference diagram No. 1).
6. Upper kelly cock valve with handle.
7. Safety valve and subs to fit all drill strings in use.
8. Two-inch minimum choke line.
9. Pressure gauge on choke manifold.
10. Fill-up line above the upper most preventor.
11. Rotating head.

CHOKE MANIFOLD DIAGRAM



MANIFOLD
3000 #W.P.

- ☒ Manual
- ☐ Hydraulic

**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**Nomenclature
Case No. 12182
Order No. R-11221**

**APPLICATION OF CONOCO INC. FOR POOL CREATION, SPECIAL POOL
RULES, AND THE ASSIGNMENT OF A SPECIAL DEPTH BRACKET
ALLOWABLE, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on May 13, 1999, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 12th day of July, 1999, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Conoco Inc., seeks the creation of a new pool for the production of oil from the Strawn formation comprising the NE/4 of Section 36, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) The applicant further seeks the adoption of special pool rules therefor, including provisions for 160-acre spacing and proration units and designated well location requirements such that wells can be located no closer than 660 feet from the outer boundary of the spacing unit nor closer than 10 feet from any quarter-quarter section line or subdivision inner boundary. The applicant further seeks the assignment of a special depth bracket allowable of 600 barrels of oil per day.

(4) At the hearing, the applicant requested that its Hardy "36" State Well No. 26 (API No. 30-025-34311), located 870 feet from the North line and 1650 feet from the East line (Unit B) of Section 36, be assigned a bonus discovery allowable pursuant to Division Rule No. 509 in the amount of 37,825 barrels of oil.

(5) Division records indicate that by Order No. R-11183 issued in Case No. 12184 on May 19, 1999, the Division:

- a) created the South Hardy-Strawn Pool comprising the NE/4 of Section 36, Township 20 South, Range 37 East, NMPM; and
- b) assigned the Conoco Inc. Hardy "36" State Well No. 26 a bonus discovery allowable in the amount of 37,825 barrels of oil to be produced over a two-year period.

(6) Division records further indicate that by Order No. R-11204 issued in Case No. 12200 on June 14, 1999, the Division corrected its previous nomenclature by redesignating the South Hardy-Strawn Pool as the **North Hardy-Strawn Pool**.

(7) That portion of the application seeking the creation of a new pool for production of oil from the Strawn formation and for the assignment of a bonus discovery allowable to its Hardy "36" State Well No. 26 should be dismissed.

(8) In support of its proposed 160-acre spacing and special depth bracket allowable of 600 barrels of oil per day for the North Hardy-Strawn Pool, the applicant presented engineering evidence and testimony indicating that:

- a) the Hardy "36" State Well No. 26 was drilled during March, 1998 and completed in the Strawn formation during April, 1998;
- b) the Hardy "36" State Well No. 26 initially produced at a rate of 722 BOPD, 0 BWPD and 778 MCF gas per day. Peak production from the well, which occurred on April 29, 1998, was 1,570 BOPD, 0 BWPD and 1,331 MCF gas per day;
- c) the Hardy "36" State Well No. 26 is currently capable of production in excess of 600 barrels of oil per day;
- d) the North Hardy-Strawn Pool appears to be a solution gas drive reservoir;
- e) extensive production testing demonstrates that producing the Hardy "36" State Well No. 26 at a rate of 600 barrels of oil per day has little or no effect on the producing GOR, which is consistently at or below 1,000 cubic feet of gas per barrel of oil; and

- f) preliminary production and drainage data demonstrate that the Hardy "36" State Well No. 26 is capable of draining an area of approximately 190 acres.

(9) The applicant requested that the proposed 160-acre well spacing and special depth bracket allowable for the North Hardy-Strawn Pool be adopted for a temporary period of eighteen months in order to provide the applicant and other operators in the pool the opportunity to gather additional engineering data to support continuation of the special pool rules on a permanent basis.

(10) No offset operator and/or interest owner appeared at the hearing in opposition to the application.

(11) Approval of this application will provide the applicant the opportunity to efficiently develop the Strawn reservoir underlying the NE/4 of Section 36, thereby preventing waste, will prevent the drilling of unnecessary wells, and will otherwise protect correlative rights.

(12) Special pool rules, including provisions for 160-acre spacing and proration units, designated well location requirements, and a special depth bracket allowable of 600 barrels of oil per day for the North Hardy-Strawn Pool should be established for a temporary period of eighteen months.

(13) The applicant did not present sufficient evidence to justify the establishment of 10-foot interior quarter-quarter section setback requirements; therefore, standard 330-foot interior quarter-quarter section setback requirements should be adopted.

(14) This case should be re-opened at an examiner hearing in December, 2000, at which time the operators in the North Hardy-Strawn Pool should be prepared to appear and present evidence and testimony to support the continuation of the special pool rules on a permanent basis.

IT IS THEREFORE ORDERED THAT:

(1) The application of Conoco Inc. for the creation of a new pool for the production of oil from the Strawn formation comprising the NE/4 of Section 36, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, is hereby dismissed.

(2) The application of Conoco Inc. for the assignment of a bonus discovery allowable for its Hardy "36" State Well No. 26 (API No. 30-025-34311), located 870 feet from the North line and 1650 feet from the East line (Unit B) of Section 36, in the amount of 37,825 barrels of oil is hereby dismissed.

(3) Pursuant to the application of Conoco Inc., special pool rules for the North Hardy-Strawn Pool are hereby adopted as follows:

**TEMPORARY SPECIAL POOL RULES FOR THE
NORTH HARDY-STRAWN POOL**

Rule 1. Each well completed in or recompleted in the North Hardy-Strawn Pool or in the Strawn formation within one mile thereof, and not nearer to or within the limits of another designated Strawn pool, shall be spaced, drilled, operated, and produced in accordance with these Rules.

Rule 2. Each well completed in or recompleted in the North Hardy-Strawn Pool shall be located on a standard unit containing 160 acres, more or less, substantially in the form of a square which is a governmental quarter section and a legal subdivision of the United States Public Lands Survey.

Rule 3. The Director may grant an exception to the requirements of Rule 2 without hearing when an application has been duly filed under the provisions of **Division Rule 104.D.(2)**.

Rule 4. Each well shall be located no closer than 660 feet to the outer boundary of the spacing unit nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary.

Rule 5. The Director may grant an exception to the requirements of Rule 4 without hearing when an application has been duly filed under the provisions of **Division Rule No. 104.F**.

Rule 6. The allowable for a standard proration unit (158 through 162 acres) shall be based on a special depth bracket allowable of 600 barrels of oil per day, and in the event there is more than one well on a 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 160 acres.

Note: These rules will expire in December 2000, unless evidence is presented at a hearing at that time supporting their continuation on a permanent basis.

IT IS FURTHER ORDERED THAT:

(1) The location of any well presently drilling to or completed in the North Hardy-Strawn Pool or in the Strawn formation within one mile thereof is hereby approved. The operator of any well having an unorthodox location shall notify the Division's Hobbs District Office in writing of the name and location of the well within 20 days from the date of this order.

(2) Existing oil wells in the North Hardy-Strawn Pool shall have dedicated thereto 160 acres in accordance with the foregoing pool rules, or may have non-standard spacing or proration units established by the Division and dedicated thereto.

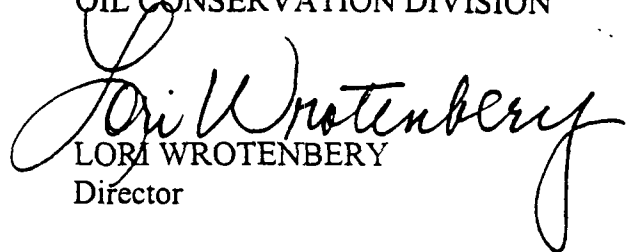
Failure to file new Forms C-102 with the Division dedicating 160 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable.

(3) This case shall be re-opened at an examiner hearing in December, 2000, at which time the operators in the North Hardy-Strawn Pool should be prepared to appear and present evidence to support the continuation of the special pool rules on a permanent basis.

(4) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


LORI WROTENBERY
Director



S E A L

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**APPLICATION OF CONOCO, INC. FOR POOL
CREATION, SPECIAL POOL RULES, AND THE
ASSIGNMENT OF A SPECIAL DEPTH BRACKET
ALLOWABLE, LEA COUNTY, NEW MEXICO.**

**NOMENCLATURE
Reopened Case No. 12182**

**APPLICATION OF CONOCO, INC. TO INCREASE
THE SPECIAL DEPTH BRACKET ALLOWABLE
FOR THE NORTH HARDY-STRAWN POOL, LEA
COUNTY, NEW MEXICO.**

Case No. 12532

Order No. R-11221-A

ORDER OF THE DIVISION

BY THE DIVISION:

These cases came on for hearing at 8:15 a.m. on November 16, 2000, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 2nd day of February, 2001, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of these cases and their subject matter.

(2) By Order No. R-11183 issued in Case No. 12184, dated May 19, 1999 and made effective June 1, 1999, the Division created and defined the South Hardy-Strawn Pool for the production of oil from the Strawn formation, later redesignated as the North Hardy-Strawn Pool by Division Order No. R-11204 issued in Case No. 12200, dated June 14, 1999 and made effective July 1, 1999. The horizontal limits for this pool, as currently designated, include the following lands in Lea County, New Mexico:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM

Section 36: NE/4

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM

Section 30: SW/4

Section 31: W/2.

(3) The "*Temporary Special Pool Rules for the North Hardy-Strawn Pool*," as promulgated by Division Order No. R-11221, issued in Case No. 12182 and dated July 12, 1999, currently provide for the following:

(A) 160-acre spacing;

(B) designated well locations such that wells are to be located no closer than 660 feet to any outer boundary of a unit and no closer than 330 feet to any quarter-quarter section or subdivision inner boundary; and

(C) a special depth bracket oil allowable of 600 barrels of oil per day and a limiting gas/oil ratio of 2,000 cubic feet of gas per barrel of oil, which results in a casinghead gas allowable of 1200 MCF per day.

(4) In addition, upon application by Conoco Inc., the Division has previously issued the following administrative orders granting exceptions to the aforementioned special well location requirements for the North Hardy-Strawn Pool:

(A) Administrative Order NSL-4332, dated July 21, 1999, for the SEMU Well No. 134 (API No. 30-025-34382) located 450 feet from the West line and 1650 feet from the South line (Lot 3/Unit L) of Section 30, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico and Administrative Order NSL-4332-A (SD), dated February 18, 2000, for the D. M. Warren Well No. 137 (API No. 30-025-34963) located 400 feet from the South line and 990 feet from the West line (Lot 4/Unit M) of Section 30, both wells to be simultaneously dedicated to a standard 160.50-acre oil spacing and proration unit comprising Lots 3 and 4 and the E/2 SW/4 (SW/4 equivalent) of Section 30;

(B) Administrative Order NSL-4433, dated July 21, 1999, as corrected by order dated January 25, 2000, for the SEMU Well No. 135 (API No. 30-025-34666) located 1330 feet from the South line and 1980 feet from the East line

(Unit J) of Section 25, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico and dedicated to a standard 160-acre oil spacing and proration unit comprising the SE/4 of Section 25;

(C) Administrative Order NSL-4412, dated February 18, 2000, as amended by order dated May 23, 2000, for the State "25-A" Well No. 3 (API No. 30-025-34953) located 330 feet from the South line and 2310 feet from the West line (Unit N) of Section 25, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico and dedicated to a standard 160-acre oil spacing and proration unit comprising the SW/4 of Section 25;

(D) Administrative Order NSL-4413, dated February 18, 2000, for the SEMU Well No. 139 (API No. 30-025-35043) located 990 feet from the North line and 330 feet from the East line (Unit A) of Section 25, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico and dedicated to a standard 160-acre oil spacing and proration unit comprising the NE/4 of Section 25;

(E) Administrative Order NSL-4429, dated April 5, 2000, for the Meyer "B-31" Well No. 5 (API No. 30-025-34960) located 2310 feet from the South line and 1850 feet from the West line (Unit K) of Section 31, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico and dedicated to a standard 160.10-acre oil spacing and proration unit comprising Lots 3 and 4 and the E/2 SW/4 (SW/4 equivalent) of Section 31;

(F) Administrative Order NSL-4430, dated April 5, 2000, as amended by Administrative Order NSL-4430-A (NSBHL), dated January 26, 2001, for the Hardy "36" State Well No. 27 (API No. 30-025-34794) located on the surface 2200 feet from the South line and 1650 feet from the East line (Unit J) of Section 36, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico and dedicated to a standard 160-acre oil spacing and proration unit/high-angle horizontal directional drilling project area comprising the SE/4 of Section 36;

(G) Administrative Order NSL-4450, dated May 23, 2000, for the State "KL" 36 Well No. 29 (API No. 30-025-34999) located 330 feet from the North line and 2310 feet from the West line (Unit C) of Section 36, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico and dedicated to a standard 160-acre oil spacing and proration unit comprising the NW/4 of Section 36; and

(H) Administrative Order NSL-4543, dated January 26, 2001, for the SEMU Well No. 154 to be drilled 1760 feet from the South line and 2310 feet from the East line (Unit J) of Section 30, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico and dedicated to a standard 160-acre oil spacing and proration unit comprising the SE/4 of Section 30.

(5) At the hearing the applicant presented oil and gas ownership and other evidence, which demonstrates that:

(A) Conoco, Inc. is the only operator of wells within the North Hardy-Strawn Pool;

(B) the only other working interest owners are Atlantic Richfield Company ("ARCO") and Chevron USA Production Company ("Chevron"), which have interests in some of the wells;

(C) both ARCO and Chevron support granting Conoco, Inc.'s applications to make the current spacing and well location requirements permanent and increase the depth bracket allowable; and

(D) Conoco has complied with the notification requirements of Division Rule 1207.A (4) (b) (ii).

(6) As required by Ordering Paragraph No. (3) of Division Order No. R-11221, the applicant presented geologic and geophysical evidence, which demonstrates that:

(A) the location of high capacity producing wells in this pool is highly dependent upon lithology and influenced by structural positioning;

(B) even with the use of 3-D seismic data, it is difficult to locate wells where the lithology is favorable and consists of thick portions of net dolomite with good permeability;

(C) the current well location requirements for this pool restrict standard well locations to essentially four (4) 2.5-acre drill blocks within a standard 160-acre spacing unit (quarter section);

(D) 160-acre spacing units have served to expedite the orderly development of the pool by allowing the drilling of the fewest wells necessary to define the

probable limits of the pool;

(E) it has been necessary and will continue to be necessary to consider exceptions to the special pool rules for unorthodox well locations, which is best accomplished on a well-by-well basis; this will serve to assure the continued orderly development of this pool and the shallower oil pools above the Strawn spaced on 40-acre spacing; and

(F) 160-acre spacing units continue to be the most appropriate sized spacing unit for the North Hardy-Strawn Pool.

(7) There have been ten completions within the North Hardy-Strawn Pool, seven of which are currently producing. In mid-2000 the Hobbs District Office of the Division allowed Conoco, Inc. to conduct step rate tests on the Meyer "B-31" Well No. 5, the D. M. Warren Well No. 137, and the SEMU Well No. 139 by authorizing a testing allowable for each. Based on data obtained from these step rate tests and from the other completions, Conoco, Inc. presented petroleum engineering evidence demonstrating that:

(A) the pool is a solution gas drive reservoir with no water drive, and no primary or secondary gas cap;

(B) reservoir waste will not occur by increasing the depth bracket oil allowable because ultimate oil recovery will not be affected by the rates at which wells are produced;

(C) there has been no pressure depletion between wells and thus, even with the various unorthodox well locations, wells in the pool have not been drilled on too dense a pattern;

(D) drainage areas on the seven producing wells range from 80 acres to 190 acres and therefore 160-acre spacing units are appropriate for this pool;

(E) wells can be produced at rates up to 900 barrels of oil per day with little effect on the producing GOR, which is consistently at or below 2,000 cubic feet of gas per barrels of oil;

(F) four of the seven wells in the pool are capable of effectively and efficiently producing Strawn formation oil at rates of up to 900 barrels per day which is in excess of this pool's current maximum oil allowable of 600 barrels per day; and

(G) once liquid load up occurs within flowing wells, these wells have the capacity to produce on artificial lift at optimum economic rates up to 900 BOPD.

(8) At the time of the hearing the applicant requested the Division consider retroactive approval of its request to increase the depth bracket allowable to correspond with the time the Hobbs District Office authorized the step-rate testing of the three aforementioned wells.

(9) Approval of Conoco, Inc.'s applications by making the special rules governing the North Hardy-Strawn Pool permanent will not cause waste nor impair correlative rights. Further, increasing the depth bracket allowable from 600 BOPD to 900 BOPD should serve to provide the necessary incentive to most economically produce the wells in this pool and can be accomplished without waste or violation of correlative rights. Approval of these applications is in the best interest of conservation and is consistent with sound engineering practices.

IT IS THEREFORE ORDERED THAT:

(1) Effective July 1, 2000, the application of Conoco Inc. seeking an order increasing the depth bracket oil allowable within the North Hardy-Strawn Pool from 600 BOPD to 900 BOPD per standard 160-acre spacing unit is **hereby granted**.

(2) Rule 6 of the "*Special Pool Rules for the North Hardy-Strawn Pool*," as promulgated by Division Order No. R-11221, issued in Case No. 12182 and dated July 12, 1999, is hereby amended to read as follows:

"Rule 6. The allowable for a standard proration unit (158 through 162 acres) shall be based on a special depth bracket allowable of 900 barrels of oil per day, and in the event there is more than one well on a 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 160 acres."

(3) The special rules governing the North Hardy-Strawn Pool, including the increase in depth bracket oil allowable to 900 BOPD, are hereby made permanent.

(4) All existing wells and spacing and proration units assigned to the North Hardy-Strawn Pool will be subject to all applicable portions of Division Rules 501 through 509 related to oil proration and allocation.

(5) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Lori Wrotenbery
LORI WROTENBERY
Director

District I
625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
Revised March 17, 1999

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Submit to appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☒ AMENDED REPORT

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

¹ Operator Name and Address Conoco Inc., 10 Desta Drive, Suite 649W, Midland, TX 79705		² OGRID Number 005073
		³ API Number 30-025-34969
¹ Property Code 4390 25982	⁵ Property Name State "KM" 36	⁶ Well No. 28

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
D	36	20S	37E		675	North	760	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

Hardy-Strawn North

¹⁰ Proposed Pool 2

¹¹ Work Type Code N	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3505'
¹⁶ Multiple No	¹⁷ Proposed Depth 8370'	¹⁸ Formation Strawn	¹⁹ Contractor	²⁰ Spud Date 4/15/00

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	J-55, 8-5/8"	24#	1500'	723	Surface
7-7/8"	J-55, 5-1/2"	17#	8070'	1212	Surface

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

Conoco proposes to amend an existing APD due to the name change from Hardy 36 State #28 to State "KM" 36 #28 and the location change from 990' FNL to 675' FNL and from 510' FWL to 760' FWL.

Attached are the supporting documents to indicate the changes.

Permit Expires 1 Year From Approval
Date Unless Drilling Underway

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: <i>Jo Ann Johnson</i>		Approved by: <i>Chris Williams</i>	
Printed name: Jo Ann Johnson		Title:	
Title: Sr. Property Analyst		Approval Date: <i>4/18/00</i>	Expiration Date:
Date: 4/6/00	Phone: 915/686-5515	Conditions of Approval: <i>18 2000</i>	
		Attached <input type="checkbox"/>	

DISTRICT I
1625 N. French Dr., Hobbs, NM 58240

State of New Mexico

Form C-102
Revised March 17, 1990

Energy, Minerals and Natural Resources Department

DISTRICT II
611 South First, Artesia, NM 88210

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT III
1000 Rio Brazos Rd., Artesia, NM 87410

OIL CONSERVATION DIVISION

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

2040 South Pacheco
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34969	Pool Code 96893	Pool Name Hardy - Strawn, North
Property Code 13396 25982	Property Name STATE "KM" 36	Well Number 28
OGRID No. 005073	Operator Name CONOCO INC.	Elevation 3505'

Surface Location

UL or lot No. D	Section 36	Township 20 S	Range 37 E	Lot Idn	Feet from the 675	North/South line NORTH	Feet from the 760	East/West line WEST	County LEA
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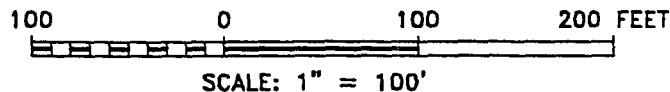
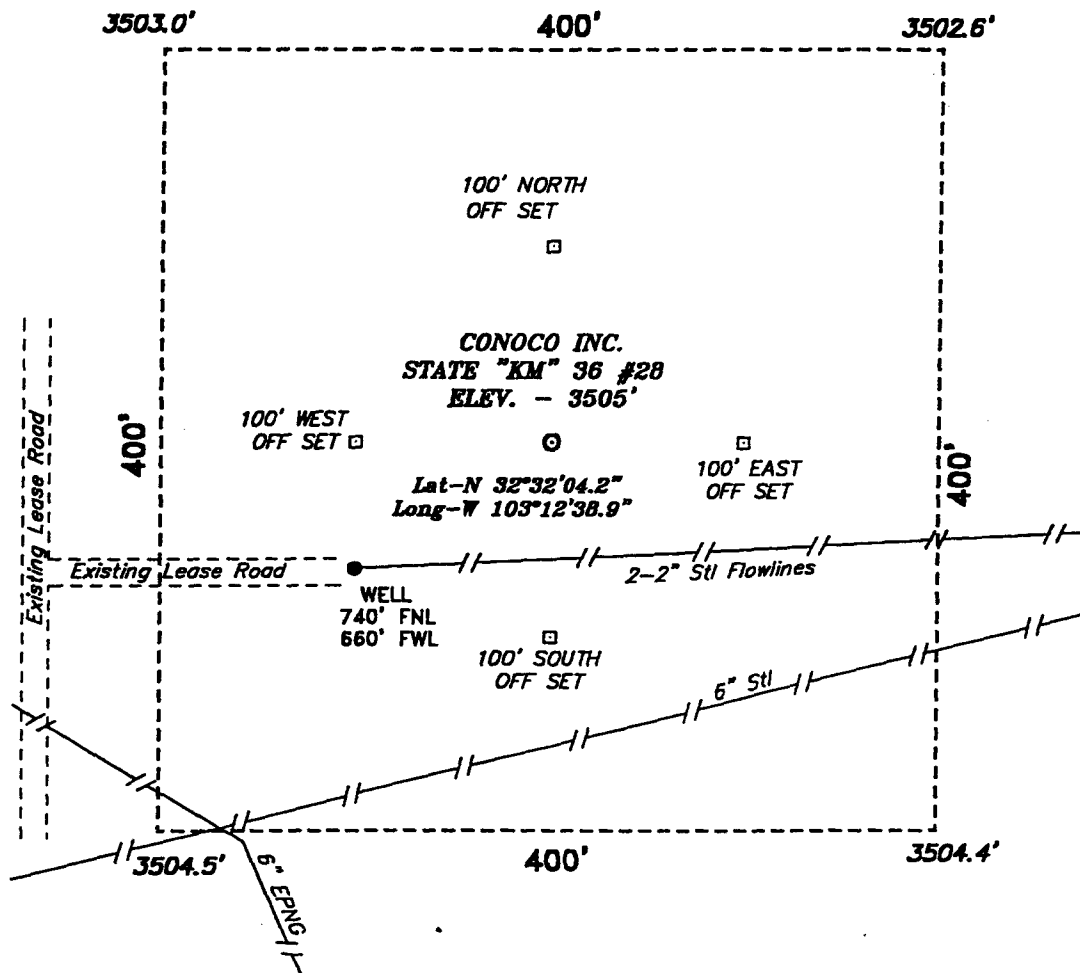
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
Dedicated Acres 160	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

<p>LAT - N32°32'04.2" LONG - W103°12'38.9"</p>	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <u>Jo Ann Johnson</u> Signature Jo Ann Johnson Printed Name Sr. Property Analyst Title April 6, 2000 Date
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. March 21, 2000 Date Surveyed Signature & Seal of Professional Surveyor NEW MEXICO W.O. No. 04194 Certificate No. Gary Jones 7977 DART SURVEYS

**SECTION 36, TOWNSHIP 20 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



DIRECTIONS TO WELL LOCATION:

FROM THE JUNCTION OF CO. RD. 18 AND CO. RD. 49,
GO NORTHWEST ON CO. RD. C-49 APPROX. 5 MILES TO
A LEASE ROAD; THENCE NORTHEAST ON LEASE ROAD
APPROX. 4400 FEET; THENCE EAST ON A LEASE ROAD
TO A POINT ON THE PROPOSED WELL PAD.

BASIN SURVEYS P.O. BOX 1786--HOBBS, NEW MEXICO

W.O. Number: 0149 Drawn By: K. GOAD

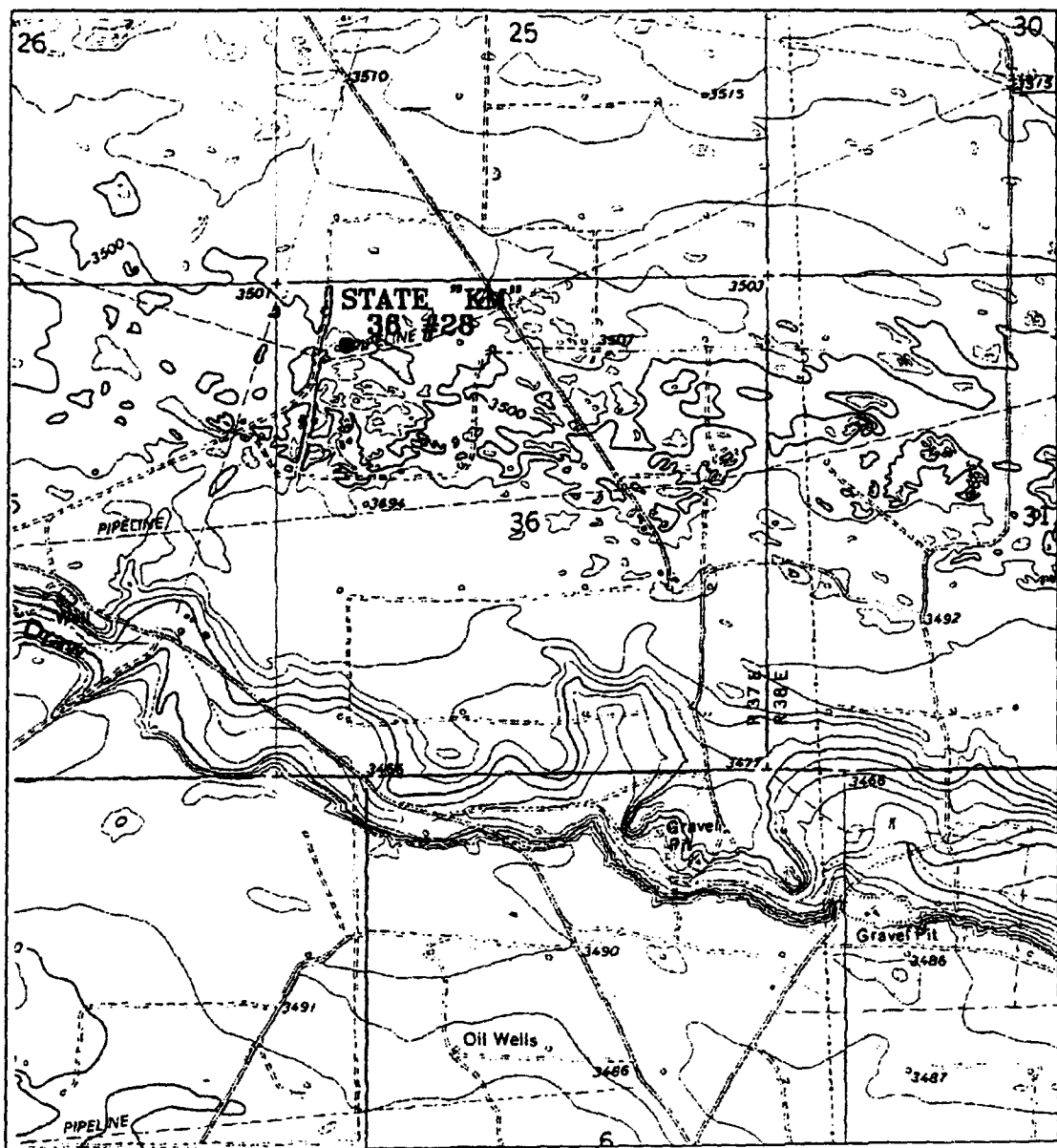
Date: 03-22-200 Disk: KJG #122 - 0149A.DWG

Conoco Inc.

REF: STATE "KM" 36 No. 28 / Well Pad Topo

THE STATE "KM" 36 No. 28 LOCATED 675' FROM THE
NORTH LINE AND 760' FROM THE WEST LINE OF
SECTION 36, TOWNSHIP 20 SOUTH, RANGE 37 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 03-21-2000 Sheet 1 of 1 Sheets



STATE "KM" 36 #28

Located at 675' FNL and 760' FWL

Section 36, Township 20 South, Range 37 East,
N.M.P.M., Lea County, New Mexico.

basin
surveys

focused on excellence
in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

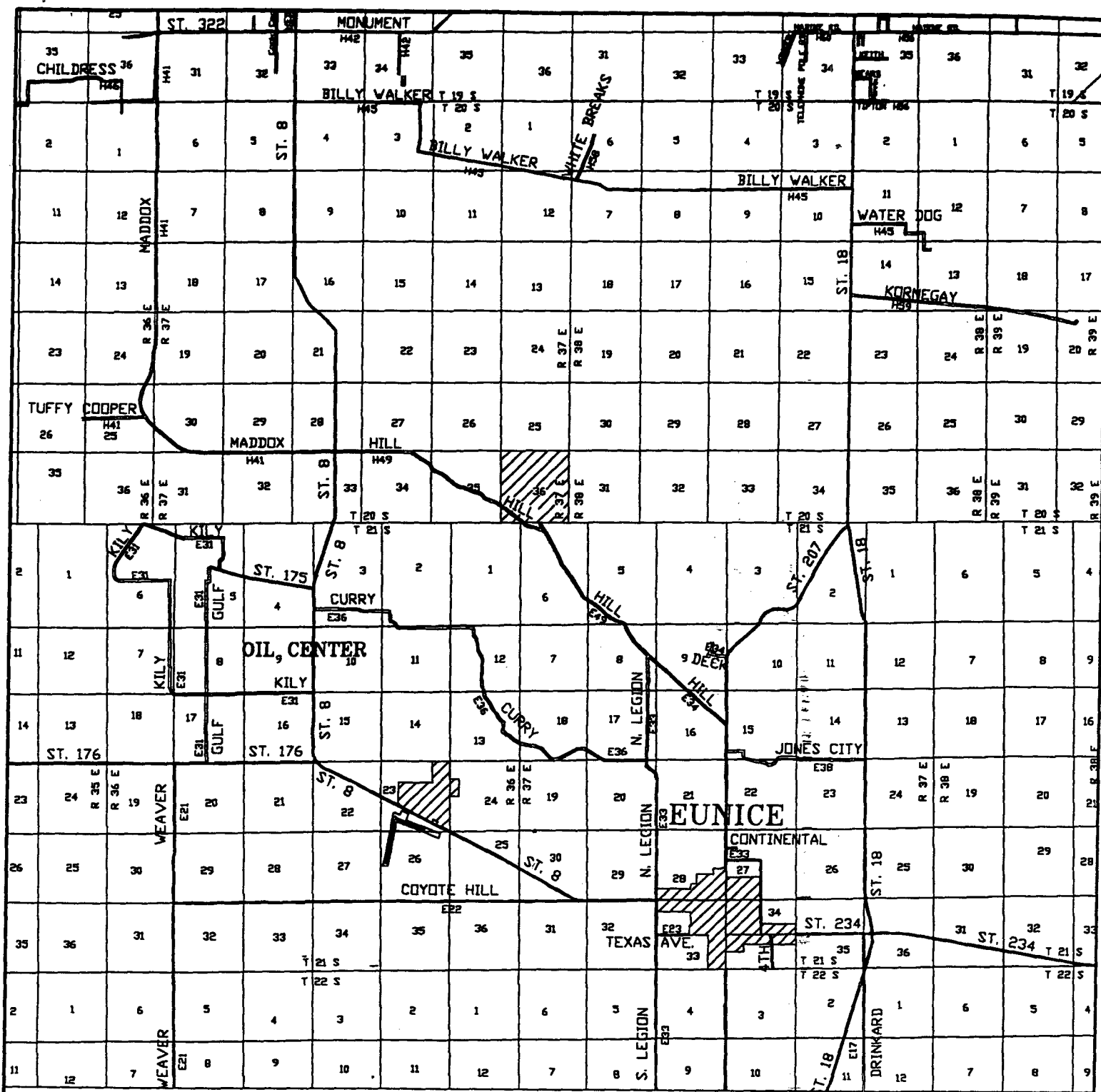
W.O. Number: 0149AA - KJG #122

Survey Date: 03-21-2000

Scale: 1" = 2000'

Date: 03-22-2000

CONOCO INC.



STATE "KM" 36 #28
 Located at 675' FNL and 760' FWL
 Section 36, Township 20 South, Range 37 East,
 N.M.P.M., Lea County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basin-surveys.com

W.O. Number: 0149AA - KJG #122

Survey Date: 03-21-2000

Scale: 1" = 2 MILES

Date: 03-22-2000

CONOCO INC.

PROPOSED WELL PLAN OUTLINE



WELL NAME
LOCATION

State "KM" 36 No. 28
875' FMI & 760' FWL Sec 36, T20S, R37E

Ground Level : 3516 est.
Kelly Bushing: 11' AGL

Depth MD	FORMATION TOPS	DRILLING PROBLEMS	TYPE OF FORMATION EVALUATION	HOLE SIZE	CASING PROGRAM	FRAC GRAD	FORM. PRES. GRAD.	Mud Weight & Type	Days
0		Possible Hole Enlargement & Sloughing		12-1/4"			Less than 8.3	8.4 - 9.5 Fresh	
1000					8-5/8", 24#, J-55 ST&C @ 1,500'				3
	Top Salt @ 1,300'	Washouts in Salt Section		7-7/8"	Circulate Cement			10 Brine	
2000							Less than 8.4		
	Base Salt @ 2,550'								
	Yates 2,710'								
	7 Rivers 2,962'		H2S Monitor on at 2,650'						
3000									
	Queen 3,509'	Shallow gas flows in SEMU # 125 & 126 not expected at this location							
	Penrose 3,634'								
	Grayburg 3,777'		Mud Log 3,776' to TD						
4000	San Andres 3,998'	Lost Returns in San Andres							7
5000									
	Glorietta 5,223'	Possible differential sticking thru Glorietta & Paddock							
	Blinberry Mkr 5,788'								
6000									
	Tubb 6,341'								
	Drinkard 6,632'								
	Abo 6,929'		First Log Run: SGR-CAL-DLL-MLL-BHC FDC-CNL-PE : TD to 2650' Pull GR-CNL-Cal to Surf SGR from TD to 6400'						
7000			Second Log Run: 30 rotary sidewall cores						
	Strawn 7,720'		Third Run: FMI imaging log		5-1/2", 17.0#, J-55 LT&C 1/0'-8,070' Circulate Cement			10 ppg Starch Gel	20
8000	TD @ 8,070'	STOP DRILLING WHEN WOODFORD SHALE IS CUT Severe losses in Devonian							
	Devonian 8,120'								

Note: The Devonian formation is associated with severe lost circulation problems. This well will be TD'd very close to the top of the Devonian. The mud loggers will pick the Woodford shale which is about 40' thick and sits on top of the Devonian. Stop drilling once the Woodford is entered.

DATE 06-Apr-00

Joe Huck, Geophysical Advisor

APPROVED Yong Cho, Drilling Engineer

Joe Miller, Reservoir Engineer



Proposal No: 180253435B

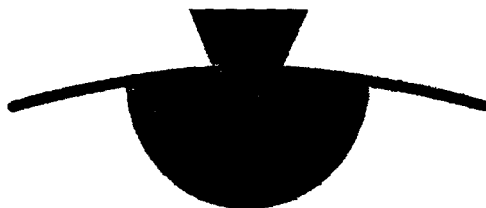
Conoco
State 'KM' 36 No. 28

Sec. 36-T20S-R37E
Lea County, New Mexico
April 5, 2000

Cement Recommendation

Prepared for:
Yong Cho
Drilling Engineer

Prepared by:
Rocky Chambers
Region Engineer
Bus Phone: 915/683-2781
Mobile: 915/557-1239
Pager: 915/498-1605



POWER VISION™

Service Point:
Hobbs
Bus Phone: (505) 392-5556
Fax: (505) 392-7307

Service Representatives:
Wayne Davis
Account Manager
Bus Phone: (915) 683-2781
Fax: (915) 683-1443

Well Name: State 'KM' 36 No. 28
 Job Description: 8-5/8" Surface
 Date: April 5, 2000



Proposal No: 180253435B

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.250 HOLE	1,500	1,500

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
8.625	8.097	24	1,500	1,500

Float Collar set @	1,460 ft
Mud Density	9.00 ppg
Est. Static Temp.	86 ° F
Est. Circ. Temp.	85 ° F

VOLUME CALCULATIONS

1,200 ft	x	0.4127 cf/ft	with	100 % excess	=	988.9 cf
300 ft	x	0.4127 cf/ft	with	100 % excess	=	247.6 cf
40 ft	x	0.3576 cf/ft	with	0 % excess	=	14.3 cf (inside pipe)
TOTAL SLURRY VOLUME					=	1250.9 cf
					=	223 bbls

Well Name: State 'KM' 36 No. 28
 Job Description: 8-5/8" Surface
 Date: April 5, 2000



Proposal No: 180253435B

FLUID SPECIFICATIONS

Spacer

1,000.0 gals Mud Clean I @ 8.4 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	989	/ 1.88	= 528 sacks (35:65) Poz (Fly Ash):Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 96.5% Fresh Water
Tail Slurry	262	/ 1.34	= 195 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.005 gps FP-6L + 56.3% Fresh Water

Displacement

93.0 bbls FRESH WATER

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.88	1.34
Amount of Mix Water (gps)	10.07	6.35
Amount of Mix Fluid (gps)	10.07	6.35

Well Name: State 'KM' 36 No. 28
Job Description: 8-5/8" Surface
Date: April 5, 2000



Proposal No: 180253435B

PRICE ESTIMATE

Product Material

QTY	UNIT	PRODUCT DESCRIPTION	UNIT PRICE	GROSS AMOUNT	DISC (%)	NET AMOUNT
539	sacks	Class C Cement	10.60	5,713.40	50.0	2,856.70
1286	lbs	Calcium Chloride	0.49	630.14	50.0	315.07
2757	lbs	Bentonite	0.22	606.54	50.0	303.27
132	lbs	Cello Flake	2.30	303.60	50.0	151.80
185	sacks	Poz (Fly Ash)	5.45	1,008.25	50.0	504.13
1	ea	Cement Plug, Rubber, Top 8-5/8 in	139.00	139.00	50.0	69.50
1500	gals	Mud Clean I	0.75	1,125.00	48.0	585.00
4	gals	FP-6L	45.00	180.00	50.0	90.00
Product Material Subtotal:				\$9,705.93		\$4,875.47

Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	UNIT PRICE	GROSS AMOUNT	DISC (%)	NET AMOUNT
804	cu ft	Bulk Materials Service Charge	1.60	1,286.40	50.0	643.20
Service Charges Subtotal:				\$1,286.40		\$643.20

Equipment

QTY	UNIT	PRODUCT DESCRIPTION	UNIT PRICE	GROSS AMOUNT	DISC (%)	NET AMOUNT
1	6hrs	Cement Pump Casing, 1001 - 1500 ft	1,360.00	1,360.00	50.0	680.00
1	job	Data Acquisition, Cement, Standard	670.00	670.00	50.0	335.00
40	miles	Mileage, Heavy Vehicle	3.60	144.00	50.0	72.00
40	miles	Mileage, Auto, Pick-Up or Treating Van	2.15	86.00	50.0	43.00
Equipment Subtotal:				\$2,260.00		\$1,130.00

Unless specified, the prices are based on 6 hours on location.

The technical data contained in this proposal is based on the best information available at the time of writing and is subject to further analysis and testing. The pricing data contained in this proposal are estimates only and may vary depending on the work actually performed. Pricing does not include federal, state and local taxes or royalties.

This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

Job Name: State 'KM' 36 No. 28
Job Description: 8-5/8" Surface
Date: April 5, 2000



Proposal No: 180253435B

PRICE ESTIMATE

Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	UNIT PRICE	GROSS AMOUNT	DISC (%)	NET AMOUNT
684	ton-mi	Bulk Delivery, Dry Products	1.20	820.80	50.0	410.40
Freight/Delivery Charges Subtotal:				\$820.80		\$410.40
TOTAL:				\$14,073.13		\$7,059.07

Unless specified, the prices are based on 6 hours on location.

The technical data contained in this proposal is based on the best information available at the time of writing and is subject to further analysis and testing. The pricing data contained in this proposal are estimates only and may vary depending on the work actually performed. Pricing does not include federal, state and local taxes or royalties.

This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

Well Name: State 'KM' 36 No. 28
 Job Description: 5-1/2" Long String
 Date: April 5, 2000



Proposal No: 180253435B

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.097 CASING	1,500	1,500
7.875 HOLE	8,070	8,070

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
5.500	4.892	17	8,070	8,070

Float Collar set @ 8,030 ft
 Mud Density 8.70 ppg
 Est. Static Temp. 129 ° F
 Est. Circ. Temp. 122 ° F

VOLUME CALCULATIONS

1,500 ft	x	0.1926 cf/ft	with	0 % excess	=	288.9 cf
4,000 ft	x	0.1733 cf/ft	with	50 % excess	=	1039.5 cf
2,570 ft	x	0.1733 cf/ft	with	50 % excess	=	667.9 cf
40 ft	x	0.1305 cf/ft	with	0 % excess	=	5.2 cf (inside pipe)
TOTAL SLURRY VOLUME					=	2001.5 cf
					=	357 bbls

Well Name: State 'KM' 36 No. 28
 Job Description: 5-1/2" Long String
 Date: April 5, 2000



Proposal No: 180253435B

FLUID SPECIFICATIONS

Spacer

1,500.0 gals Mud Clean I @ 8.4 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	1328	/ 1.85	= 718 sacks (35:65) Poz (Fly Ash):Class C Cement + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 95.7% Fresh Water
Tail Slurry	673	/ 1.36	= 494 sacks Class C Cement + 1% bwoc BA-58 + 2 lbs/sack Potassium Chloride + 0.4% bwoc CD- 32 + 0.7% bwoc FL-52 + 0.005 gps FP-6L + 0.2% bwoc Sodium Metasilicate + 56.2% Fresh Water

Displacement

186.7 bbls FRESH WATER

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.85	1.36
Amount of Mix Water (gps)	9.98	6.34
Amount of Mix Fluid (gps)	9.99	6.34
Estimated Pumping Time - 70 BC (HH:MM)	2:19	2:30
Free Water (mls) @ 80 ° F @ 90 ° angle	2.0	0.0
Fluid Loss (cc/30min) at 1000 psi and 80 ° F	722.0	98.0

RHEOLOGIES

<u>FLUID</u>	<u>TEMP</u>	<u>600</u>	<u>300</u>	<u>200</u>	<u>100</u>	<u>6</u>	<u>3</u>
Lead Slurry	@ 80 ° F	102	92	88	84	40	25
Tail Slurry	@ 80 ° F	300	250	185	110	12	7

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
Revised March 17, 1999

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Submit to appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

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

¹ Operator Name and Address Conoco Inc., 10 Desta Drive, Suite 649W, Midland, TX 79705		² OGRID Number 005073
		³ API Number 30-025-34969
⁴ Property Code 13396	⁵ Property Name Hardy "36" State	⁶ Well No. 28

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
D	36	20S	37E		990	North	510	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
Hardy-Strawn North

¹⁰ Proposed Pool 2

¹¹ Work Type Code N	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3505'
¹⁶ Multiple No	¹⁷ Proposed Depth 8300'	¹⁸ Formation Strawn	¹⁹ Contractor	²⁰ Spud Date 3/15/00

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	M-50, 8-5/8"	23#	1500'	723	Surface
7-7/8"	J-55, 5-1/2"	17#	8000'	1206	Surface

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

- Well Location and Acreage Dedication Plat (C-102)
- Proposed Well Plan Outline
- Cementing Program
- BOP/Choke Diagram

Permit Expires 12/31/2000
Date Unless Drilling Underway

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: <i>Jo Ann Johnson</i>		Approved by: <i>Chris Williams</i>	
Printed name: Jo Ann Johnson		Title: DISTRICT 10 SUPERVISOR	
Title: Sr. Property Analyst		Approval Date: MAR 13 2000	Expiration Date:
Date: 3/6/00	Phone: 915/686-5515	Conditions of Approval:	
		Attached <input type="checkbox"/>	

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34969	Pool Code 96893	Pool Name Hardy - Strawn, North
Property Code 13396	Property Name HARDY "36" STATE	Well Number 28
OGRID No. 005073	Operator Name CONOCO INC.	Elevation 3505'

Surface Location

UL or lot No. D	Section 36	Township 20 S	Range 37 E	Lot Idn	Feet from the 990	North/South line NORTH	Feet from the 510	East/West line WEST	County LEA
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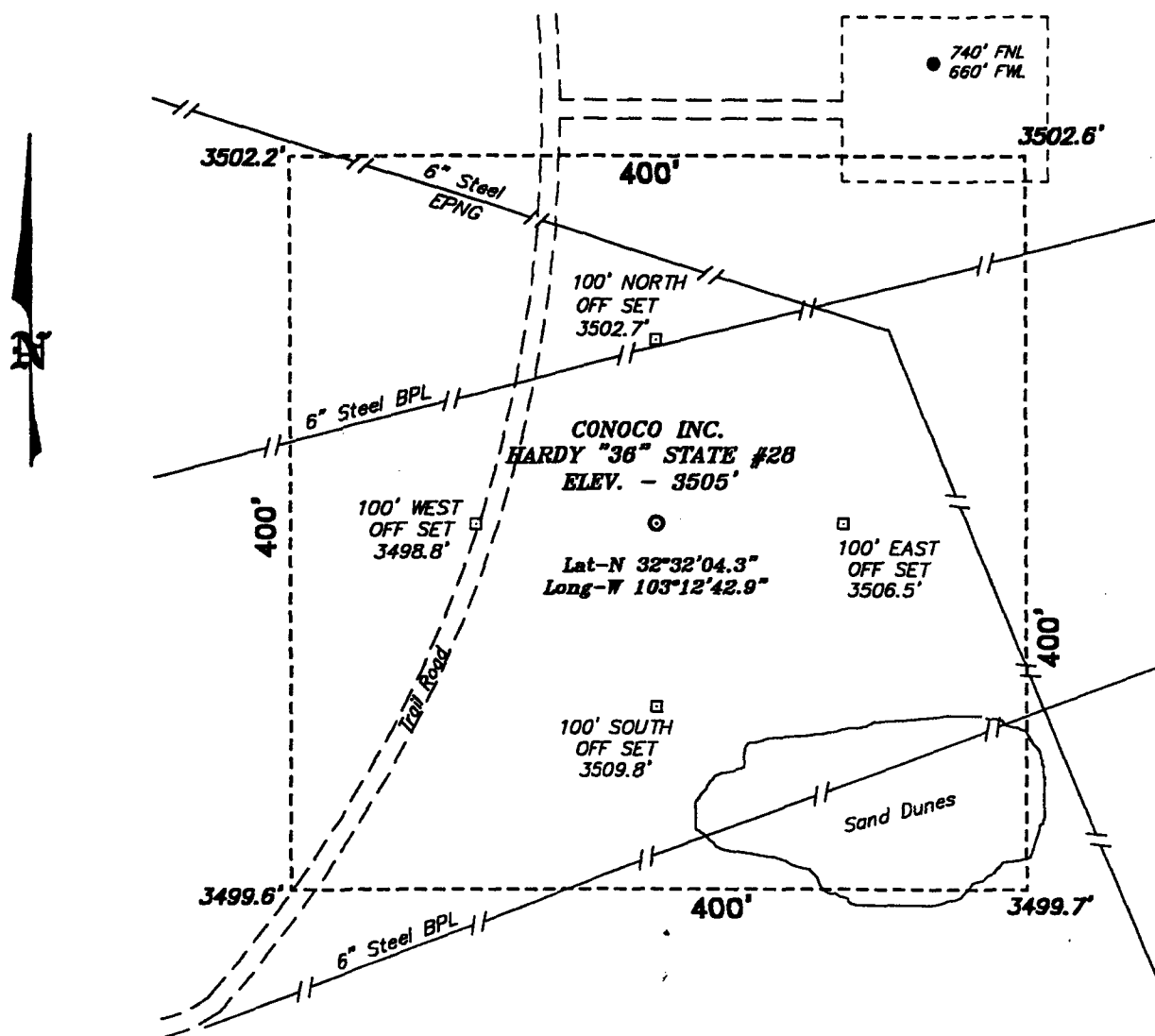
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No. NSL Applied For						

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

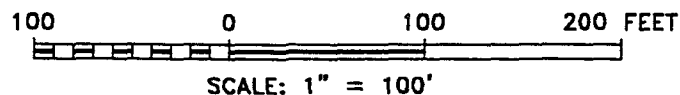
<p>3502.2' 3502.6' 3499.6' 3499.7' 510' 990'</p> <p>LAT - N 32°32'04.3" LONG - W 103°12'42.8"</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Jo Ann Johnson</i> Signature</p> <p>Jo Ann Johnson Printed Name</p> <p>Sr. Property Analyst Title</p> <p>3/6/00 Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>January 08, 2000 Date Surveyed</p> <p><i>L. JONES</i> Signature of Surveyor</p> <p>Professional Surveyor 7977</p> <p>W.O. No. 00684 Certificate of Survey</p> <p>Basin Surveys</p>
---	---

**SECTION 36, TOWNSHIP 20 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



DIRECTIONS TO WELL LOCATION:

FROM THE JUNCTION OF US HWY 62/180 AND STATE HWY 8, GO SOUTH ON HWY 8 APPROX. 11 MILES TO CO. RD. C-49; THENCE EAST AND SOUTH EAST ON C-49 APPROX. 2 MILES TO A LEASE ROAD; THENCE NORTHEAST ON A LEASE ROAD APPROX. 4500 FEET TO THE PROPOSED WELL LOCATION.



BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 0060

Drawn By: K. GOAD

Date: 02-10-2000

Disk: KJG #122 - 0060A.DWG

Conoco Inc.

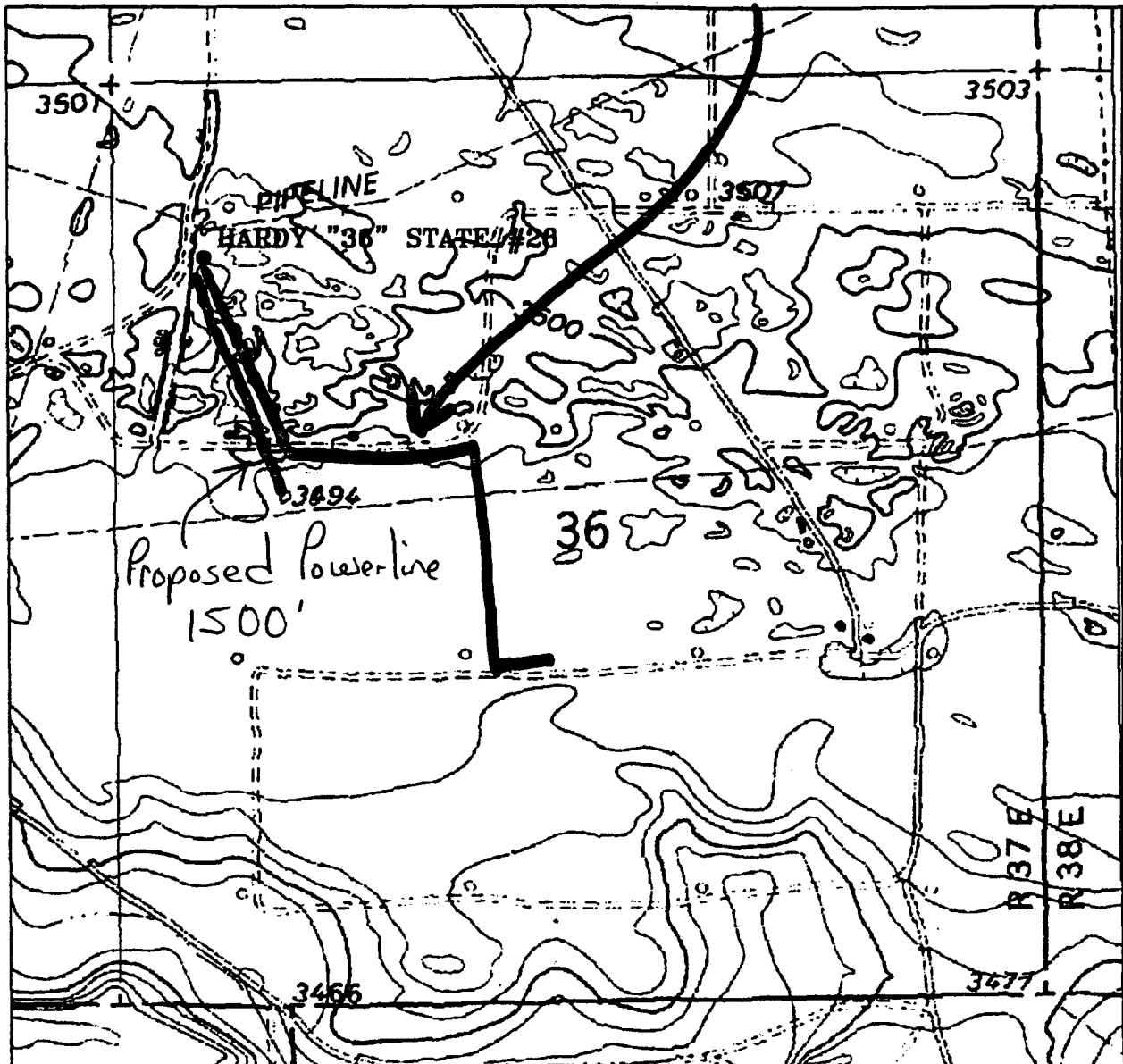
REF: HARDY "36" STATE No. 28 / Well Pad Topo

THE HARDY "36" STATE No. 28 LOCATED 990' FROM THE NORTH LINE AND 510' FROM THE WEST LINE OF SECTION 36, TOWNSHIP 20 SOUTH, RANGE 37 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 02-09-2000

Sheet 1 of 1 Sheets

Proposed Flowline Route 3850'



HARDY "36" STATE #28

Located at 990' FNL and 510' FWL

Section 36, Township 20 South, Range 37 East,
N.M.P.M., Lea County, New Mexico.

basin
surveys
focused on excellence
in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number: 0060AA - KJG #122

Survey Date: 02-09-2000

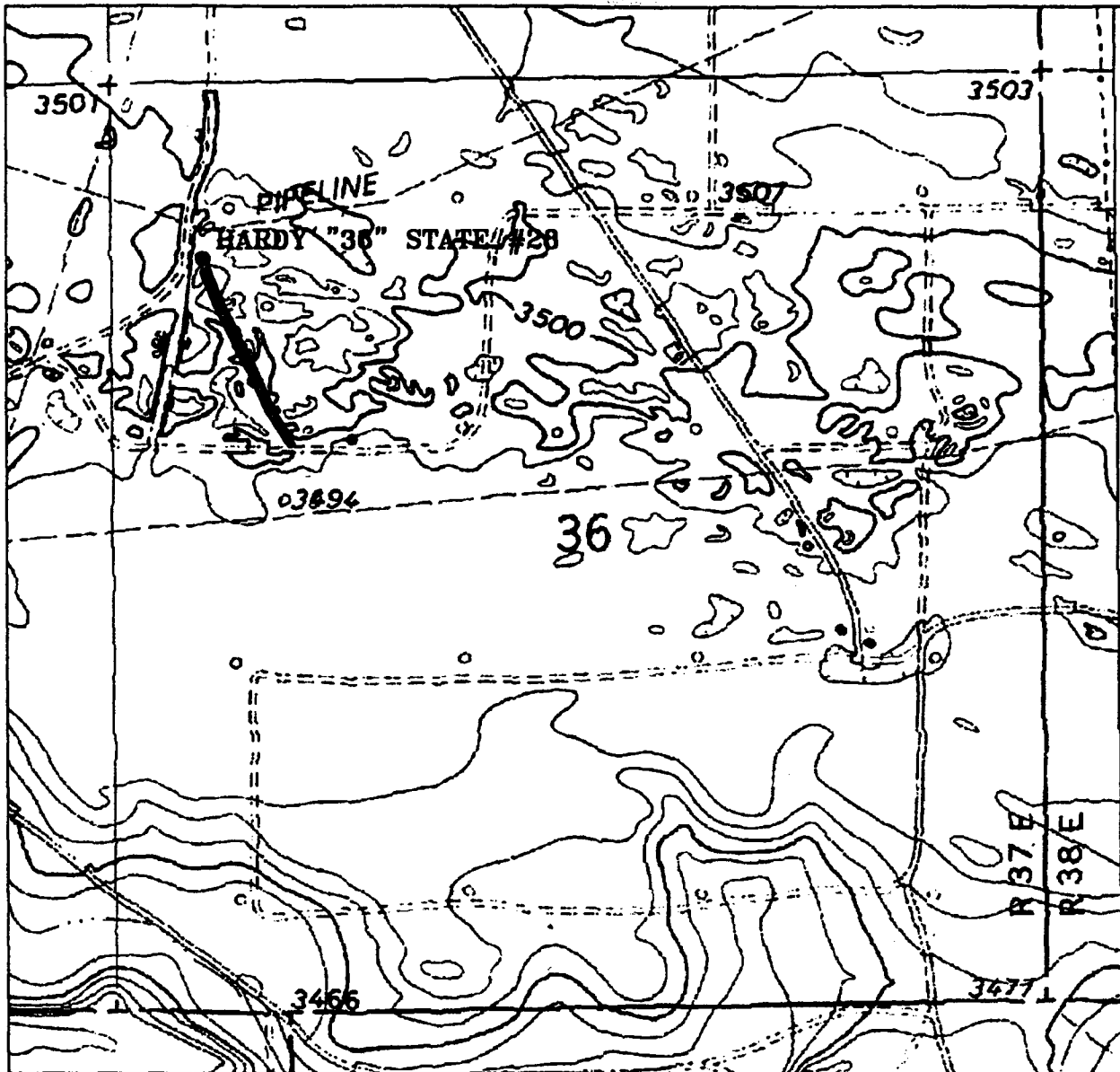
Scale: 1" = 1000'

Date: 02-10-2000

CONOCO INC.

Proposed Access Road

1100'



HARDY "36" STATE #28

Located at 990' FNL and 510' FWL

Section 36, Township 20 South, Range 37 East,
N.M.P.M., Lea County, New Mexico.

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W.O. Number: 0060AA - KJG #122

Survey Date: 02-09-2000

Scale: 1" = 1000'

Date: 02-10-2000

CONOCO INC.

PROPOSED WELL PLAN OUTLINE

WELL NAME
LOCATION

Hardy 36 State #28
990' FNL & 510' FWL Sec 36, T20S, R37E

Ground Level : 7
Kelly Bushing: 11' AGL

Depth MD	FORMATION TOPS	DRILLING PROBLEMS	TYPE OF FORMATION EVALUATION	HOLE SIZE	CASING PROGRAM	FRAC GRAD	FORM. PRES. GRAD.	Mud Weight & Type	Days
0		Possible Hole Enlargement & Sloughing		12-1/4"			Less than 8.3	8.4 - 9.5 Fresh	
1000									
	Top Salt @ 1,400'				8-5/8", 23#, M-50 ST&C @ 1,500'				3
		Washouts in Salt Section		7-7/8"	Circulate Cement			10 Brine	
2000							Less than 8.4		
	Base Salt @ 2,550'								
	Yates 2,670'		Mud Loggers F/ 2,650' to TD						
	7 Rivers 2,950'		H2S Monitor on at 2,650'						
3000									
	Queen 3,510'	Shallow gas flows in SEMU # 125 & 126 not expected at this location							
	Penrose 3,635'								
	Grayburg 3,770'								
4000	San Andres 4,000'	Lost Returns in San Andres							7
5000									
	Glorietta 5,275'	Possible differential sticking thru Glorietta & Paddock							
	Blaine Mkr 5,890'								
6000									
	Tubb 6,390'								
	Drinkard 6,700'								
	Abo 6,985'		First Log Run: GR-CAL-DLL-MLL-SGR FDC-CNL-PE : TD to 2650' Pull GR-CNL-Cal to Surf SGR interval to be chosen						
7000			Second Log Run: 30 rotary sidewall cores						
	Strawn 7,725'		Possible Third Run: FMI imaging log		5-1/2", 17.0#, J-55 LT&C f/0'-8,000' Circulate Cement			10 ppg Starch Gel	20
8000	TD @ 8,000'	STOP DRILLING WHEN WOODFORD SHALE IS CUT Severe losses in Devonian							
	Devonian 8,120'								

Note: The Devonian formation is associated with severe lost circulation problems. This well will be TD'd very close to the top of the Devonian. The mud loggers will pick the Woodford shale which is 40' thick and sits on top of the Devonian. Stop drilling once the Woodford is entered.

DATE 07-Feb-00

Joe Huck, Geophysical Advisor

APPROVED

Yong Cho, Drilling Engineer

Joe Miller, Reservoir Engineer



Proposal No: 180253051A

Conoco
Hardy 36 St. #28

Sec. 36-T20S-R37E
Lea County, New Mexico
February 2, 2000

Well Recommendation

Prepared for:
Yong Cho
Drilling Engineer

Prepared by:
Rocky Chambers
Region Engineer
Bus Phone: 915/683-2781
Mobile: 915/557-1239
Pager: 915/498-1605



POWERVISIONSM

Service Point:
Hobbs
Bus Phone: (505) 392-5556
Fax: (505) 392-7307

Service Representatives:
Wayne Davis
Account Manager
Bus Phone: (915) 683-2781

Operator Name: Conoco
Well Name: Hardy 36 St. #28
Job Description: 8-5/8" Surface
Date: February 2, 2000



Proposal No: 180253051A

JOB AT A GLANCE

Depth (TVD)	1,500 ft
Depth (MD)	1,500 ft
Hole Size	12.25 in
Casing Size/Weight :	8 5/8 in, 24 lbs/ft
Pump Via	Casing 8 5/8" O.D. (8.097" I.D) 24 #
Total Mix Water Required	6,555 gals
Spacer	
Mud Clean I	1,500 gals
Density	8.4 ppg
Lead Slurry	
LEAD SLURRY	528 sacks
Density	12.7 ppg
Yield	1.88 cf/sack
Tail Slurry	
TAIL SLURRY	195 sacks
Density	14.8 ppg
Yield	1.34 cf/sack
Displacement	
FRESH WATER	93 bbls

Operator Name: Conoco
 Well Name: Hardy 36 St. #28
 Job Description: 8-5/8" Surface
 Date: February 2, 2000



Proposal No: 180253051A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.250 HOLE	1,500	1,500

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
8.625	8.097	24	1,500	1,500

Float Collar set @ 1,460 ft
 Mud Density 9.00 ppg
 Est. Static Temp. 86 ° F
 Est. Circ. Temp. 85 ° F

VOLUME CALCULATIONS

1,200 ft	x	0.4127 cf/ft	with	100 % excess	=	988.9 cf
300 ft	x	0.4127 cf/ft	with	100 % excess	=	247.6 cf
40 ft	x	0.3576 cf/ft	with	0 % excess	=	14.3 cf (inside pipe)
TOTAL SLURRY VOLUME					=	1250.9 cf
					=	223 bbls

Operator Name: Conoco
Well Name: Hardy 36 St. #28
Job Description: 8-5/8" Surface
Date: February 2, 2000



Proposal No: 180253051A

FLUID SPECIFICATIONS

Spacer			1,500.0 gals Mud Clean I @ 8.4 ppg	
<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>	
Lead Slurry	989	/ 1.88	= 528 sacks (35:65) Poz (Fly Ash):Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 96.5% Fresh Water	
Tail Slurry	262	/ 1.34	= 195 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.005 gps FP-6L + 56.3% Fresh Water	
Displacement			93.0 bbls FRESH WATER + 56.3% Fresh Water	

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.88	1.34
Amount of Mix Water (gps)	10.07	6.35
Amount of Mix Fluid (gps)	10.07	6.35

Operator Name: Conoco
Well Name: Hardy 36 St. #28
Job Description: 5-1/2" Long String
Date: February 2, 2000



Proposal No: 180253051A

JOB AT A GLANCE

Depth (TVD)	8,000 ft
Depth (MD)	8,000 ft
Hole Size	7.875 in
Casing Size/Weight :	5 1/2 in, 17 lbs/ft
Pump Via	Casing 5 1/2" O.D. (4.892" I.D) 17 #
Total Mix Water Required	10,238 gals
Spacer	
Mud Clean I	1,500 gals
Density	8.4 ppg
Lead Slurry	
LEAD SLURRY	718 sacks
Density	12.7 ppg
Yield	1.85 cf/sack
Tail Slurry	
TAIL SLURRY	488 sacks
Density	14.8 ppg
Yield	1.34 cf/sack
Displacement	
FRESH WATER	185 bbls

Operator Name: Conoco
Well Name: Hardy 36 St. #28
Job Description: 5-1/2" Long String
Date: February 2, 2000



Proposal No: 180253051A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.097 CASING	1,500	1,500
7.875 HOLE	8,000	8,000

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
5.500	4.892	17	8,000	8,000

Float Collar set @ 7,960 ft
 Mud Density 8.70 ppg
 Est. Static Temp. 129 ° F
 Est. Circ. Temp. 122 ° F

VOLUME CALCULATIONS

1,500 ft	x	0.1926 cf/ft	with	0 % excess	=	288.9 cf
4,000 ft	x	0.1733 cf/ft	with	50 % excess	=	1039.5 cf
2,500 ft	x	0.1733 cf/ft	with	50 % excess	=	649.7 cf
40 ft	x	0.1305 cf/ft	with	0 % excess	=	5.2 cf (inside pipe)
TOTAL SLURRY VOLUME					=	1983.3 cf
					=	354 bbls

Operator Name: Conoco
Well Name: Hardy 36 St. #28
Job Description: 5-1/2" Long String
Date: February 2, 2000



Proposal No: 180253051A

FLUID SPECIFICATIONS

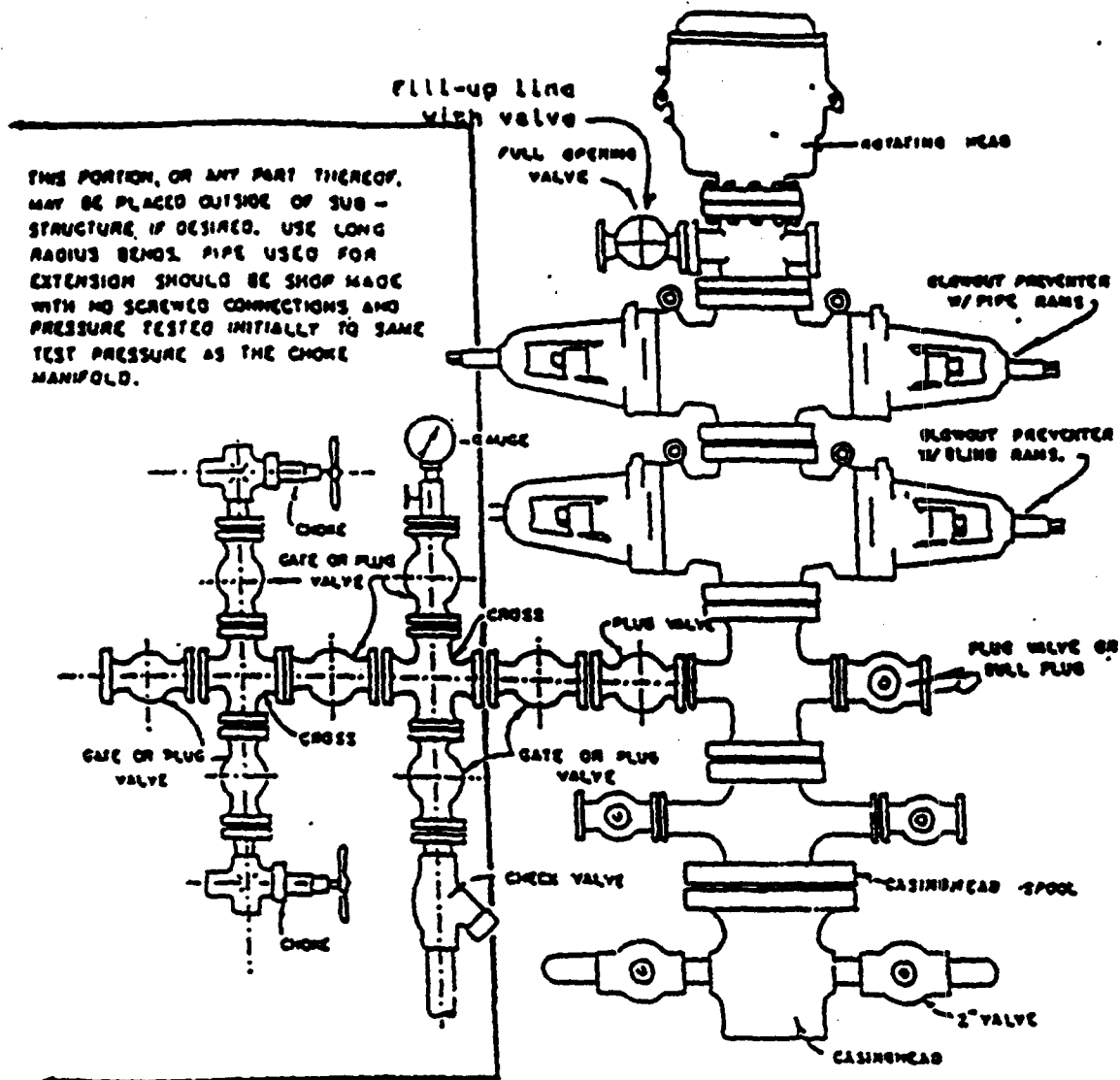
Spacer

1,500.0 gals Mud Clean I @ 8.4 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	1328	/ 1.85	= 718 sacks (35:65) Poz (Fly Ash):Class C Cement + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 95.7% Fresh Water
Tail Slurry	655	/ 1.34	= 488 sacks Class C Cement + 1% bwoc BA-58 + 0.8% bwoc FL-50 + 0.4% bwoc CD-32 + 0.005 gps FP-6L + 0.2% bwoc Sodium Metasilicate + 55.8% Fresh Water
Displacement			185.1 bbls FRESH WATER + 55.8% Fresh Water

CEMENT PROPERTIES

	<u>SLURRY NO. 1</u>	<u>SLURRY NO. 2</u>
Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.85	1.34
Amount of Mix Water (gps)	9.98	6.29
Amount of Mix Fluid (gps)	9.99	6.30

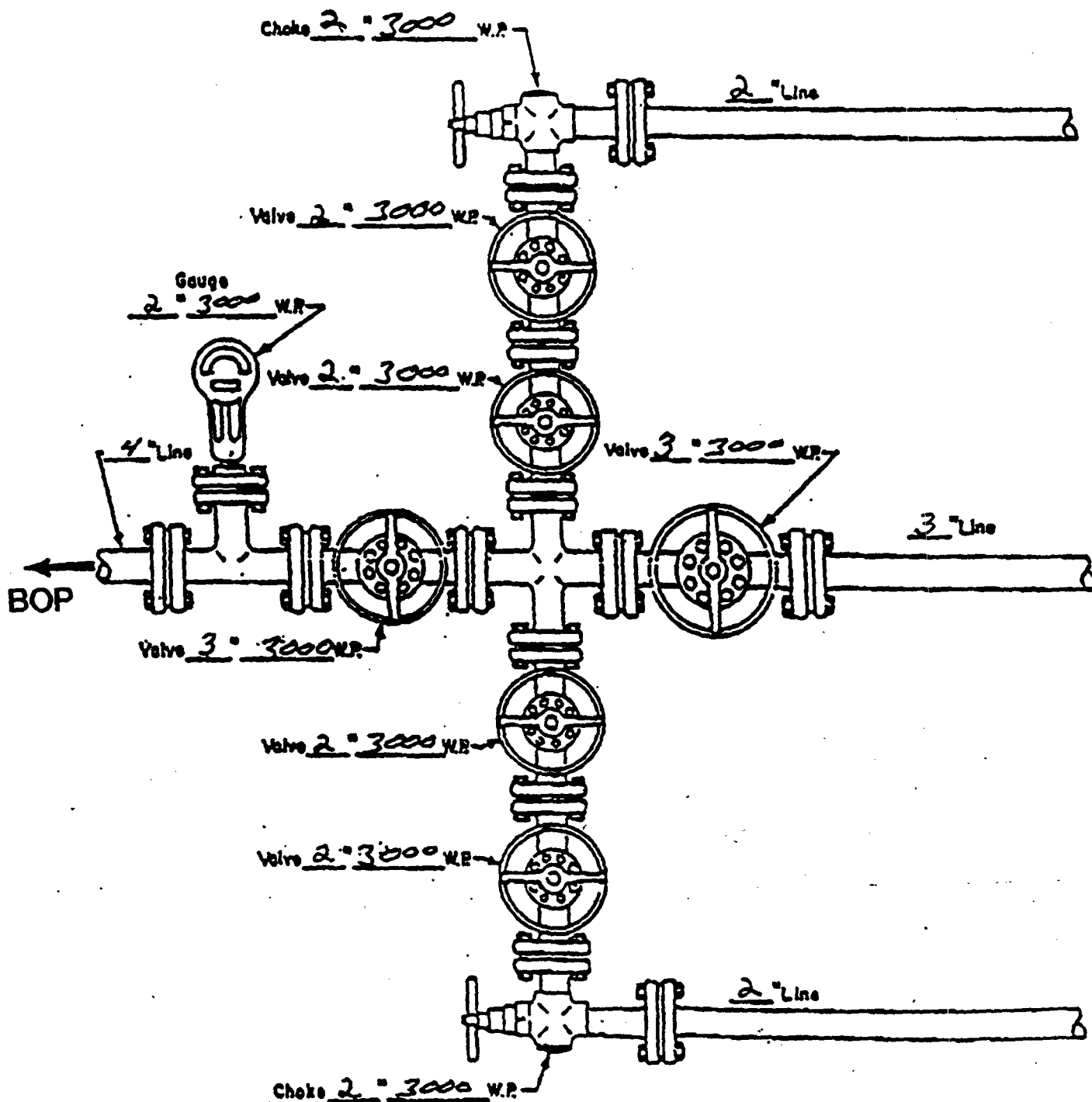


BLOWOUT PREVENTER HOOKUP

Drilling contractors used in the San Juan Basing supply 3000 psi equipment, but cannot provide annular preventors because of sub-structure limitations. Maximum anticipated surface pressures for this well will not exceed the working pressure of the proposed BOP system. Please see the attached BOP diagram details 2000 psi equipment according to Onshore Order No. 2 even though the equipment will test to 3000 psi. The 2000 psi system allows deletion of the annular preventor and fulfills your requirements (note diagram No. 1). In addition, the following equipment will comprise the 2000 psi system:

1. Two rams with one blind and one pipe ram.
2. Kill line (2 inch maximum).
3. One kill line valve.
4. One choke line valve.
5. Two chokes (reference diagram No. 1).
6. Upper kelly cock valve with handle.
7. Safety valve and subs to fit all drill strings in use.
8. Two-inch minimum choke line.
9. Pressure gauge on choke manifold.
10. Fill-up line above the upper most preventor.
11. Rotating head.

CHOKE MANIFOLD DIAGRAM



MANIFOLD
3000 #W.P.

☒ Manual
☐ Hydraulic

NSL-4450A



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

2/28/01

Lori Wrotenbery
Director
Oil Conservation Division

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC _____
DHC _____
NSL X _____
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Conoco Inc Hardy 36 State #31-F, 36-20s-37e
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK -

Yours very truly,

A handwritten signature in cursive script, appearing to read "Chris Williams".

Chris Williams
Supervisor, District 1