

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 87505Submit 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		⁶ Well No. 28
¹ Property Code 13396 25982	⁵ Property Name State "KM" 36	

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>W. L. L. L.</i>	
Printed name: Jo Ann Johnson		Title:	
Title: Sr. Property Analyst		Approval Date:	Expiration Date:
Date: 4/6/00	Phone: 915/686-5515	Conditions of Approval:	
		Attached <input type="checkbox"/>	

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

DISTRICT II
611 South First, Artesia, NM 88210

DISTRICT III
1000 Rio Brancos Rd., Artesia, 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 13396-25982	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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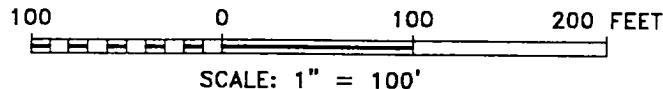
Bottom Hole Location If Different From Surface

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>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>April 6, 2000 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>March 21, 2000 Date Surveyed</p> <p><i>ARY L. JONES</i> Signature & Seal of Professional Surveyor</p> <p>NEW MEXICO 1977 W.O. No. 01439 Certificate No. Gary Jones 7977 PROFESSIONAL LAND SURVEYOR</p>

NEW MEXICO.



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.

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	

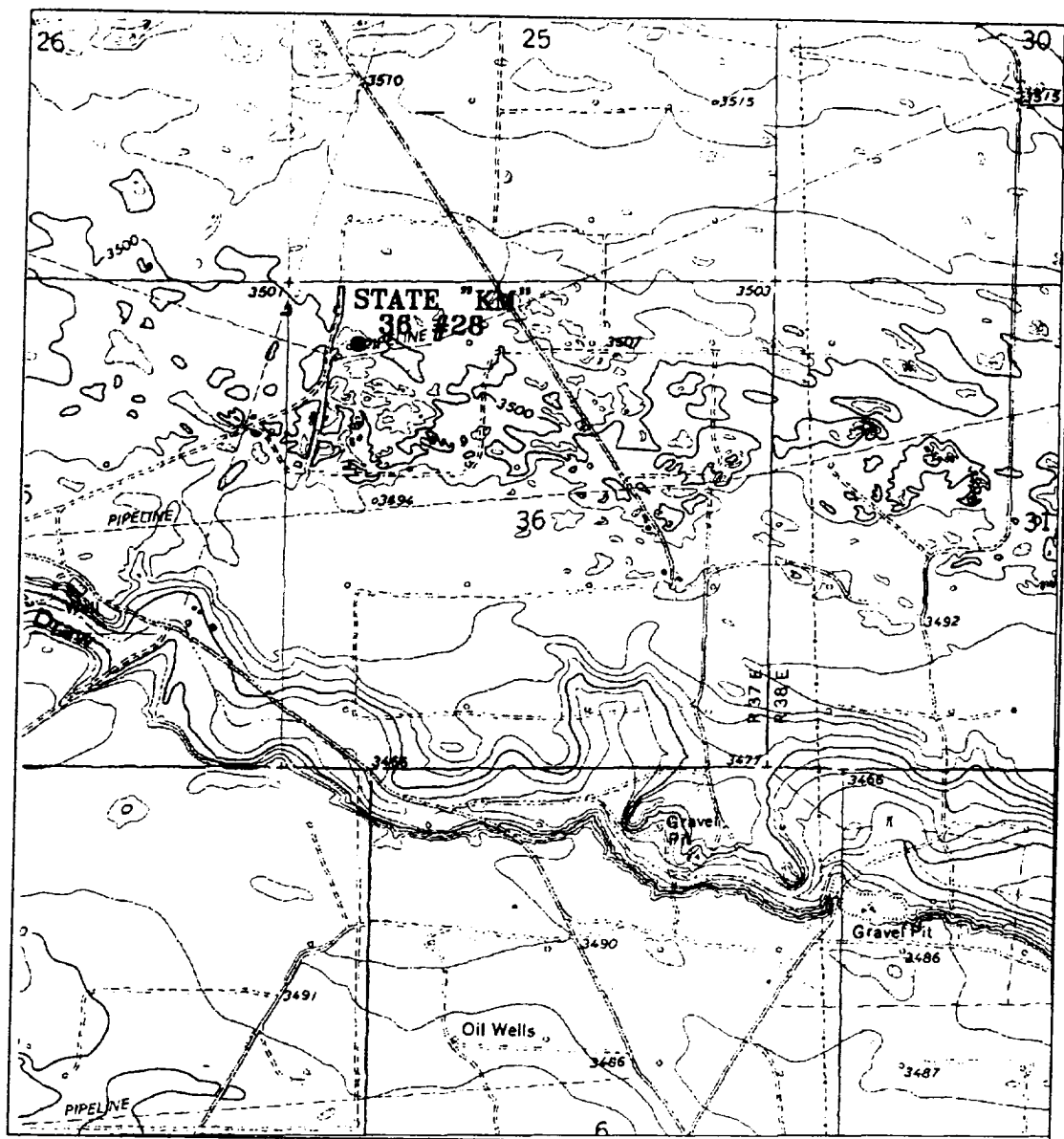
Conoco Inc.

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

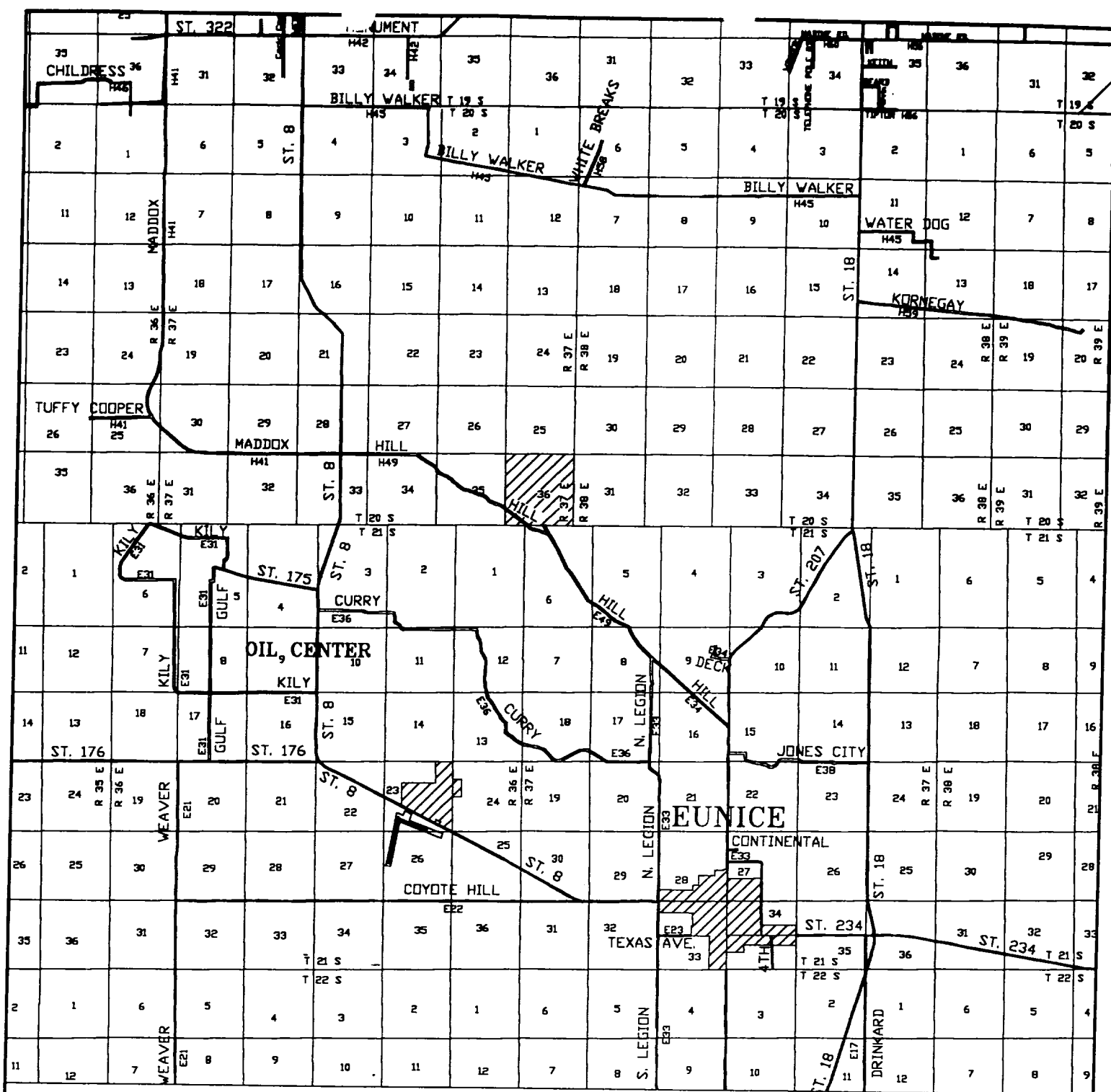
W.O. Number: 0149AA - KJG #122

Survey Date: 03-21-2000

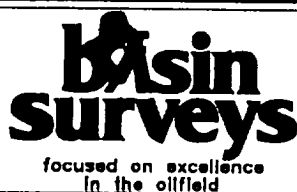
Scale: 1" = 2000'

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.



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" = 2 MILES

Date: 03-22-2000

CONOCO INC.

PROPOSED WELL PLAN OUTLINE



WELL NAME
LOCATION

State "KM" 36 No.28
878' FNL & 780' FWL Sec. 36 S. 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									
	Top Salt @ 1,300'				8-5/8", 24#, J-55 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 2,710'								
	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						
		STOP DRILLING WHEN WOODFORD SHALE IS CUT			5-1/2", 17.0#, J-55 LT&C 1/0"-8,070"			10 ppg Starch Gel	20
8000	TD @ 8,070'	Severe losses in Devonian			Circulate Cement				
	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

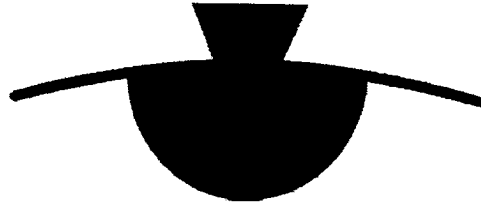
Conoco
State 'KM' 36 No. 28

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



POWERVISIONSM

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 'KM' 36 N-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

Operator Name: Conoco
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

Operator Name: 001000
 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.

Well 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.

Operator Name: Conoco
Well Name: State 'KM' 36 N-28
Job Description: 5-1/2" Long Str.
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

Operator Name: Conoco
 Well Name: State 'KM' 36 No. 28
 Job Description: 5-1/2" Long Str.
 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

	<u>SLURRY NO. 1</u>	<u>SLURRY NO. 2</u>
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