



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 7-20-87

RE: Proposed MC _____
Proposed DHC X _____
Proposed NSL / _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 7-17-87
for the Robert L. Bayless Tract 519#1 0-18-30N-2W
Operator Lease and Well No. Unit, S-T-R

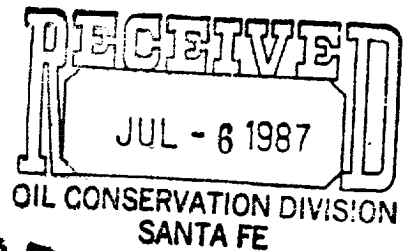
and my recommendations are as follows:

Approve

Yours truly,

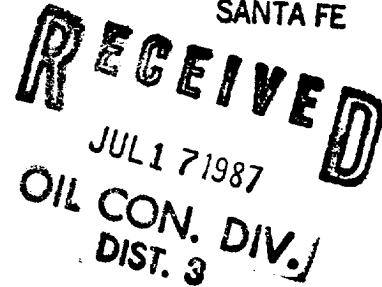
E. Basel

ROBERT L. BAYLESS
PETROLEUM PLAZA BUILDING
P. O. BOX 168
FARMINGTON, NEW MEXICO 87499
(505) 326-2659



July 2, 1987

William J. Lemay, Chairman
Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501



RE: Request for Administrative
Approval to Downhole Commingle
Robert L. Bayless
Jicarilla 519 #1
Unit O, Sec. 18, T30N-R2W
Undesignated Gallup and
Undesignated Pictured Cliffs Fields
Jicarilla Contract #519
Rio Arriba County, New Mexico

Dear Mr. Lemay:

By this letter, we request administrative approval to commingle production from the Gallup and Pictured Cliffs formations within the wellbore of the above captioned well.

The Jicarilla 519 #1 well was drilled by Amoco Production Company in November and December of 1985. A complete daily activity report for this well is presented as Attachment #1. Production casing, (5-1/2") was set and cemented at the total depth of the well, 8703 feet. The Dakota interval, (8578-8597 ft.) was tested and abandoned by setting a cast iron bridge plug at 8150 feet and capping it with 2 sacks of cement. This is the current PBTD for this well. The Gallup interval (7280-7704 ft.) was perforated and fracture stimulated with 254,730 gallons of 30# crosslinked gelled fluid containing 400,000 lbs. of 20-40 sand. Amoco determined this well to be uneconomical and turned operations of this well over to Robert L. Bayless.

Bayless ran a 3 hour flow test for the Gallup formation on May 28, 1987, which resulted in an AOF of 1032 MCFGPD (Attachment #2). A retrievable bridge plug was set at 4000 feet, and the Pictured Cliffs formation was perforated from 3723 to 3728 feet. The Pictured Cliffs formation was then fracture stimulated with 16,5000 gallons of 70 quality foam containing 20,000 lbs. of sand. A 3 hour flow test was conducted on the Pictured Cliffs formation on June 15, 1987, which resulted in an AOF of 762 MCFGPD (Attachment #3). In addition to the AOF tests performed on each zone by Bayless, a 12 day flow test was performed on the Gallup formation by Amoco in June of 1986, and Bayless performed an 8 day flow test on the Pictured Cliffs formation in June of 1987. The Gallup zone averaged 149 MCFGPD with 18 BWPD, while the Pictured Cliffs zone averaged 75 MCFGPD with 3 BWPD. Both tests were run against 50-60 psi backpressure. These tests are presented as Attachments #4 and #5.

William J. Lemay, Chairman

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The flow test results from each zone indicate that each zone has marginal gas production capabilities and some associated water production. These tested flow rates are performed against 50-60 psi backpressure, while line pressures in the area can get as high as 450-500 psi. The actual gas sales production rates from each zone will be even lower against this higher backpressure, with the possibility of the backpressure stopping flow from the zone, which would result in compression expenses to re-establish the flow. The water production seen from each zone could also restrict gas production from each zone, or possibly log off the flow from the zone. This would necessitate artificially lifting this fluid, resulting in further expenditures. If commingling is granted in this wellbore, the combined zones would have a better chance of production against higher line pressures without compression and would be better able to lift the fluid in these zones without artificial lift. The gas produced from the Gallup and Pictured Cliffs formations is very similar in this area. The average gas gravity for the Pictured Cliff zone in this area is .653 with an average BTU value of 1131, while the average gas gravity for the Gallup interval is .628, with an average BTU of 1072. The gas gravities used for each zone were taken from the closest offsetting wells having this data available. A summary of this data is presented in Attachment #6. The small difference in these values indicate that the gas produced from both zones is very similar and should not cause any damage should crossflow occur between zones.

From the AOF tests discussed earlier, the 1065 psi surface shutin pressure taken on the Pictured Cliff zone corresponds to a calculated bottomhole pressure of 1178 psi at 3725 ft.(mid perf of the P.C. zone). The 2957 psi surface shutin pressure taken on the Gallup zone corresponds to a calculated bottomhole pressure of 3600 psi at 7492 ft.(mid perf of the Gallup interval). Even though the Pictured Cliffs bottomhole pressure is less than 50% of the Gallup bottomhole pressure, the gas from both zones is very similar, and any crossflow occurring between zones will cause no damage to the formation.

The production from the Pictured Cliffs and Gallup zones could be allocated using the ratios of the rate of flow calculated during the AOF tests performed by Bayless. Using these tests, 57% of the commingled gas production should be allocated to the Gallup formation and 43% of the gas should be allocated to the Pictured Cliffs formation. This allocation formula is shown in Attachment #7. The value of the gas from each zone is approximately the same, so the commingling of this natural gas will not decrease its sales value.

Attachment #8 is an acreage plot showing the ownership of leases in the vicinity of the Jicarilla 519 #1 well. The ownership (working interest, royalty, and overriding royalty) of both the Pictured Cliffs and Gallup formations is common in this well. The operation of each of the leases

William J. Lemay, Chairman

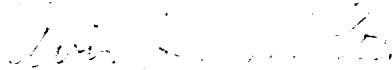
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around this well is controlled by or will be controlled by Robert L. Bayless through farmout agreements. At this time, Union Oil Company of California controls Jicarilla Contract #516. They have been notified of this commingling application by certified mail. A copy of this letter is enclosed as Attachment #9. By copy of this application, we have also advised the BLM of our plans to downhole commingle the Gallup and Pictured Cliffs formation in this well.

It is obvious from the production tests taken on the Pictured Cliffs and Gallup zones that gas production from this well will be low, resulting in marginal gas reserves and economics for the well. The high pipeline pressures in the area could force Bayless to compress this gas to produce it, or the water produced from each zone could force more expenditures to artificially lift this produced fluid. Either or both of these expenditures could possibly be avoided by approval of downhole commingling in this well.

Sincerely,



Kevin H. McCord
Petroleum Engineer

KHM:blk

Attachments

ATTACHMENT #1

DENVER REGION WYO FARMINGTON DISTRICT *** 02/13/87 *** PAGE 2

*** 11/07/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCC-PRODUCTION,
 FLAC 246167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
 AMOCC W.I. 1.0000
 REMARKS: BR X LSC-100% COMP; WSCR
 JOB INITIATION REPORT: RELEASED DRILL 10/26/83,
 FORM 46 RECEIVED BY DIST 09/27/83

*** 11/19/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCC PRODUCTION,
 FLAC 246167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
 AMOCC W.I. 1.0000
 OPERATIONS: TO 459 FT, REAM, FM CN X SH, 459
 PERTINENT DATA: RIG MOVED ON 11/18/85, RIG RELEASED 12/10/85,
 SUSPENDED 01/09/84, INDEFINITE SUSPENSION
 MUD: DEPTH 459 FT, NATIVE MUD, 8.8 PPG
 BIT AND HYDRAULICS: BIT #00001, 12.250 IN, CSC3, JETS 12/12/8 /-,
 DEPTH OUT 459 FT, 459 FT, 10.00 HRS, 110 RPM, CONDITION 8/8/-/-,
 SERIAL #RT, P# 1500 PSI, PMP #1: SIZE 6.00 X 8.00 X 102 SPM,
 COMMENTS: LOST 3 CONES
 BIT #00002, 12.250 IN, F2
 DEVIATION: DEPTH 220 FT, INCL 0.50 DEG, DIR NOOE
 DEPTH 344 FT, INCL 0.75 DEG, DIR NOOE
 TIME: DRL 10.00, TRIP 0.25, SURVEY 0.50, SERVICE RIG 0.25, REAMING 1.50,
 RIG UP 9.00, OTHER: 2.50 HRS
 COSTS: DAILY WELL \$4100, CUM WELL \$4100
 CASING: SURFACE, SET 508 FT, 11/12/85
 REMARKS: SPUD 1730 HR 11/18/85: LOST 3 CONES AT BOT OF HOLE
 MUD ADDITIVES: TYPE-VISCOSSIFIERS, 3000.00 GEL LB,
 TYPE-VISCOSSIFIERS, 200.00 LIME LB,
 CHRON TIME DISTRIBUTION (HRS):
 6.00 - 000055, RD MIRU
 1.00 - 000035, RU
 3.00 - 000037, WC CAT
 2.00 - 000035, FIN RU
 0.50 - 000035, DRL RXM HOLE
 0.00 - 000002, DRL 12-1/4 HOLE
 0.25 - 000006, SURVEY
 3.25 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 1.75 - 000002, DRL
 0.25 - 000006, SURVEY
 2.00 - 000002, DRL
 0.25 - 000001, TRIP
 1.00 - 000024, REAM 270 FT
 RIG CONTRACT DATA: CONTRACTOR SA CODE 586386, FOUR CORNERS, RIG #0004, ROTARY

ATTACHMENT #1

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DETAIL: BOTTOM 482.0 FT, 3.625 IN, WT 36.00 #/FT,
 GRADE J55, CONNECTION 8 RD ST&C, NC OF JTS. 11
 TOP 482.0 FT, BOTTOM 507.0 FT, 9.625 IN, WT 36.00 #/FT,
 GRADE J55, CONNECTION 8 RD ST&C, NC OF JTS. 1
 TOP 507.0 FT, BOTTOM 508.0 FT, 9.625 IN, WT 36.00 #/FT,
 GRADE J55, CONNECTION 8 RD ST&C, NC OF JTS. 1

TOOLS: TYPE-GUIDE SHOE, TOP 506.9 FT, BOTTOM 508.0 FT,
 NO. OF TOOLS 1, NAME-GUIDE SHOE

TYPE-OTHER, TOP 481.6 FT, BOTTOM 506.9 FT,
 NO. OF TOOLS 1, NAME-SHRT JT X INSR TOP COLLR

PRIMARY CEMENTING REPORT: STAGE 1, BATCH 1,
 PERTEANO, VOL 300 SX,
 SLURRY DENSITY 15.6 PPG,
 HOLE FLUID DENSITY 8.4 PPG,
 AVG. DISPLACEMENT PRES 250 PSI,
 AVG. DISPLACEMENT RATE 3.0 BPM,
 PRE-FLUSH WATER, 30 BBLs, DENSITY 8.4 PPG,
 DISPLACEMENT FLUID-WATER, DENSITY 8.4 PPG,
 VOL CIRC. CUT 20 BBLs,
 RETURN FLOW 100.0%

ADDITIVES:

TYPE-ACCELERATOR, 2% CALCIUM CHLORIDE 560.00 LB

*** 11/20/35 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 512 FT, WOC, FM SN X SH, 53

MUD: DEPTH 459 FT, NATIVE MUD, 9.5 PPG, VISC. 38, PH 8.5, CL 350, CA 260,
 PF 0.3, MF 0.9

BIT AND HYDRAULICS: BIT #00002, 12.250 IN, J22, JETS 11/11/11/-,
 DEPTH CUT 514 FT, 55 FT, 1.00 HRS, 102 RPM, CONDITION 2/2/1/-,

SERIAL WREARUN, PP 1800 PSI, 296 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 498 FT, INCL 1.00 DEG, DIR NOOE

TIME: DRL 2.00, TRIP 3.00, CSG & CMT 3.25, WOC 7.00, CIRC 0.50,

SERVICE RIG 0.25, REAMING 3.00, OTHER: 5.00 HRS

COSTS: DAILY WELL \$9560, CUM WELL \$13660

REMARKS: TI X BIT #2; BIT TORQUED UP; TO: NO MAGNET X JUNK SUB; MADE
 3 MAGNET RUNS: REC 3 PIECES OF CONES; LAST MAGNET RUN CLEAN PU
 12-1/4 INCH BIT DRL LAST 55 FT SURF HOLE; NO TORQ; PLUG DN
 11:00 PM

MUD ADDITIVES: TYPE-VISCOSIFIERS, 5800.00 AQUA GEL,
 TYPE-FLOCCULANTS, 150.00 LIME,
 TYPE-ALKALINITY, PH CONTROL, 100.00 SCDA ASH,
 TYPE-MATERIAL FOR LGST CIRCULATION, 200.00 CEDAR FIBER,

CHRON TIME DISTRIBUTION (-RS):

2.00 - 000024, REAM

0.25 - 000021, SERVICE RIG

1.00 - 000024, REAM TO BTM

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1.00	-	000020,	CIRC X COND MUD
0.50	-	000030,	LSDP
0.50	-	000030,	WC MAGNET
0.50	-	000030,	FI
0.50	-	000004,	TC X MAGNET
0.50	-	000004,	TI X MAGNET
0.50	-	000004,	TD REC CONES
0.50	-	000004,	TI X MAGNET
0.50	-	000004,	TC NC REC
2.00	-	000002,	DRL
0.50	-	000020,	CIRC
0.50	-	000004,	TC X BIT
1.00	-	000012,	RUN CSG
2.25	-	000011,	CMT X WOODCO
7.00	-	000013,	WC CMT

*** 11/21/35 ***

JICARILLA TRIBAL 515 NG. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$132300C,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 1514 FT, DRL, FM SXE, 1002
 MUD: DEPTH 784 FT, LSND POLYMER, 9.7 PPG, VISC. 41, FL 7.2, PH 10.0, PV 10,
 YP 12, GELS 7/16, SCLIDS 2.7%, CL 450, PF 0.7, MF 1.4
 BIT AND HYDRAULICS: BIT #00003, 8.750 IN, HP11, JETS 11/11/-/-, 1000 FT,
 15.00 HRS, WOB 27, 80 RPM, SERIAL #0000003899, PP 2000 PSI, 296 GPM,
 PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 DEVIATION: DEPTH 726 FT, INCL 2.00 DEG, DIR NOCE
 DEPTH 1181 FT, INCL 2.50 DEG, DIR NOOE
 DEPTH 1337 FT, INCL 2.00 DEG, DIR NOOE
 TIME: DRL 15.50, TRIP 1.00, SURVEY 1.00, SERVICE RIG 0.50, OTHER: 6.00 HRS
 COSTS: DAILY WELL \$15946, CUM WELL \$29606
 MUD ADDITIVES: TYPE-VISCOUSIFIERS, 5000.00 GEL,
 TYPE-MATERIAL FOR LOST CIRCULATION, 50.00 HULLS,
 TYPE-FLUCCULANTS, 200.00 SODA ASH,
 TYPE-OTHER, 7.00 LOSOL QT,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRL), 700.00 STARCH,
 TYPE-OTHER, 200.00 ALDAICE,

CHRON TIME DISTRIBUTION (HRS):

2.00	-	000013,	WOC
0.25	-	000021,	RIG SERVICE
4.00	-	000013,	WOC
3.75	-	000002,	DRL
1.00	-	000004,	TRIP
1.75	-	000002,	DRL
0.25	-	000006,	SURVEY
2.50	-	000002,	DRL
0.50	-	000006,	SURVEY
1.00	-	000002,	DRL
0.25	-	000021,	RIG SERVICE

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0.00 - 000002, DRL
0.25 - 000006, SURVEY
3.00 - 000001, DRL

DATE 11/22/95 ***

JICARILLA TRIBAL 519 NG-1, WILDCAT, FOUR CORNERS 4, AMCCO PRODUCTION,

FLAG 846167-01-3, API 300392333100, AUTH TO 8520, AUTH CCST \$1323000,
AMCCO W.I. 1.0000

OPERATIONS: FL 2590 FT, DRL, FM SN X SH, 1076

MUD: DEPTH 1995 FT, LSND POLYMER, 8.8 PPG, VISC. 43, FL 10.6, PH 7.2, PV 13,
YP 10, GELS 7/19, SOLIDS 3.7%, CL 420, CA 140, MF 0.6

BIT AND HYDRAULICS: BIT #000003, 8.750 IN, HP113, JETS 11/11/-/-,
DEPTH CUT 1675 FT, 1102 FT, 19.25 HRS, WOB 30, 80 RPM, CONDITION 6/3/1/-,

SERIAL #0000003899, PP 2000 PSI, PMP #1: SIZE 6.00 X 3.00 X 102 SPM,
COMMENTS 2966 PM FLW RATE

BIT #00001, 8.750 IN, HP515, JETS 11/12/-/-, 904 FT, 15.75 HRS, WOB 40,
15 RPM, SERIAL #0000013986, PP 1800 PSI,

PMP #1: SIZE 6.00 X 3.00 X 102 SPM, COMMENTS 2966 PM FLW RATE

DEVIATION: DEPTH 1848 FT, INCL 1.75 DEG, DIR NOOE

DEPTH 1931 FT, INCL 1.25 DEG, DIR NOOE

DEPTH 2178 FT, INCL 0.75 DEG, DIR NOOE

TIME: DRL 20.00, TRIP 2.00, SURVEY 1.00, SERVICE RIG 0.75, OTHER: 0.25 HRS

COSTS: DAILY WELL \$7529, CUM WELL \$37135

MUD ADDITIVES: TYPE-VISCOFIFIERS, 5300.00 GEL LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 400.00 STARCH LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 20.00 B-466 GAL,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 5.00 EASY MUD GAL,
TYPE-MATERIAL FOR LOST CIRCULATION, 100.00 COTTON HULLS LB,
TYPE-OTHER, 5.00 LGSOL QT,
TYPE-ALKALINITY, PH CONTROL, 200.00 SCDA ASH LB,
TYPE-BIOCIDES, 50.00 ALDACIDE LB,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
0.25 - 000021, RIG SERVICE
2.25 - 000002, DRL
0.25 - 000006, SURVEY
2.00 - 000004, TRIP CUT
0.25 - 000007, WASH 48 FT TO BTM
0.00 - 000007, DRL
0.25 - 000021, RIG SERVICE
2.00 - 000002, DRL
0.25 - 000006, SURVEY
3.25 - 000002, DRL
0.00 - 000006, SURVEY
1.25 - 000002, DRL
0.25 - 000021, RIG SERVICE
5.75 - 000002, DRL

ATTACHMENT #1

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*** 11/23/85 ***

JICARILLA TRIBAL 519 NC. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 3440 FT, DRL, 350
 MUD: DEPTH 2730 FT, LSND POLYMER, 8.7 PPG, VISC. 50, FL 10.0, PH 8.0, PV 8,
 YP 7, GELS 4/11, SCLIDS 3.4%, CL 450, CA 160, PF 0.4, MF 0.8
 BIT AND HYDRAULICS: BIT #00004, 8.750 IN, HPS15, JETS 11/12/-/-, 1764 FT,
 38.00 HRS, WOB 40, 75 RPM, SERIAL #0000013986, PP 1800 PSI, 7 GPM,
 PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 DEVIATION: DEPTH 2685 FT, INCL 0.50 DEG, DIR NOOE
 DEPTH 3176 FT, INCL 0.25 DEG, DIR NOOE
 TIME: DRL 22.25, SURVEY 1.00, SERVICE RIG 0.75
 COSTS: DAILY WELL \$19144, CUM WELL \$47279
 MUD ADDITIVES: TYPE-VISCOUSIFIERS, 3400.00 GEL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 450.00 STARCH LB,
 TYPE-INHIBITORS FOR CORROSION, 10.00 777 GAL,
 TYPE-CALCIUM TREATMENT, 1.00 EZ MUD GAL,
 TYPE-BIOCIDES, 50.00 ABLACADE LB,
 TYPE-OTHER, 5.00 LOSOL QT,
 TYPE-ALKALINITY, PH CONTROL, 200.00 SODA ASH,
 TYPE-INHIBITORS FOR CORROSION, 4.00 B466 GAL,
 CHRON TIME DISTRIBUTION (HRS):
 2.00 - 000002, DRL
 0.25 - 000021, SERVICE RIG
 1.30 - 000002, DRL
 0.50 - 000006, SURVEY
 6.25 - 000002, DRL
 0.25 - 000021, SERVICE RIG
 5.00 - 000002, DRL
 0.50 - 000006, SURVEY
 2.25 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 5.75 - 000002, DRL

*** 11/24/85 ***

JICARILLA TRIBAL 519 NC. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 3661 FT, DRL, 221
 MUD: DEPTH 3561 FT, LSND POLYMER, 8.7 PPG, VISC. 52, FL 7.6, PH 8.5, PV 17,
 YP 17, GELS 8/19, SCLIDS 3.4%, CL 360, CA 60, MBT 13.0, PF 0.1, MF 0.2
 BIT AND HYDRAULICS: BIT #00004, 8.750 IN, HPS1, JETS 11/12/-/-,
 DEPTH OUT 3561 FT, 1235 FT, 42.50 HRS, WOB 40, 75 RPM, CONDITION -/2/1/-,
 SERIAL #0000013986, PP 1800 PSI, 295 GPM,
 PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 BIT #00005, 8.750 IN, SVC, JETS 12/12/12/-, DEPTH OUT 3650 FT, 89 FT,

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7.25 HRS, WOB 20, 75 PPM, SERIAL #13024A, PP 1200 PSI, 3 GPM,
 PMP #1: SIZE 3.00 X 8.00 X 102 SPM
 BIT #00005, 3.750 IN, 2B3T, JETS 12/12/-/-, 11 FT, 0.25 HRS, WOB 22,
 30 RPM, SERIAL #13-T138, PP 1200 PSI, 3 GPM,
 PMP #1: SIZE 3.00 X 8.00 X 102 SPM
 DEVIATION: DEPTH 3549 FT, INCL 0.73 DEG, DIR NONE
 TIME: DRL 11.75, TRIP 7.50, SURVEY 0.25, CIRC 0.75, SERVICE RIG 0.25,
 REAMING 0.75, OTHER: 2.75 HRS
 COSTS: DAILY WELL \$7080, CUM WELL \$54367
 BOTTOM HOLE ASSEMBLY: DEPTH IN 3650 FT,

BHA DETAIL: OTHER, 1.000 FT, CD 4.500
 OTHER, 10.340 FT, MANUFACTURER STRATBIT-PC2B3T
 OTHER, 619.000 FT, CD 6.313 IN, ID 2.250 IN, MANUFACTURER 20 DCS
 OTHER, 121.000 FT, CD 4.500 IN, ID 2.875 IN,
 MANUFACTURER WEIGHT PIPE
 OTHER, CD 4.500 IN, ID 3.250 IN, MANUFACTURER DP

MUD ADDITIVES: TYPE-VISCOUSIFIERS, AQUA GEL 107004
 TYPE-INHIBITORS FOR CORROSION, 10.00 415 GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 1500.00 STARCH LB,
 TYPE-BIGCIDES, 10.00 B-486 GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 10.00 EZ MUD GAL,
 TYPE-ALKALINITY, PH CONTROL, 100.00 CAUSTIC SODA LB,
 TYPE-VISCOUSIFIERS, 16.00 LESOL QT,
 TYPE-MATERIAL FOR LOST CIRCULATION, 150.00 C/F,
 TYPE-ALKALINITY, PH CONTROL, 500.00 SODA ASH LB,
 TYPE-MATERIAL FOR WEIGHTING, 1100.00 BARGID LB,
 TYPE-OTHER, 50.00 ALUMIN STARITE,
 TYPE-INHIBITORS FOR CORROSION, 10.00 777 GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
 0.25 - 000021, SERVICE RIG
 2.50 - 000002, DRL
 0.50 - 000015, CIRC SAMP
 0.25 - 000006, SURVEY
 4.25 - 000004, TRIP
 0.75 - 000024, REAM 72 FT TC 3TM
 0.25 - CIRC
 7.25 - 000002, DRL
 1.25 - 000002, TRY TC DRL
 3.25 - 000004, TC
 1.25 - 000037, WASH TC BTM 45 FT
 0.25 - 000072, DRL

*** 11/25/85 ***

JICARILLA TRIBAL 512 NG-1, WILDEAT, FOUR CORNERS-4, AMCCB PRODUCTION,

FLAC 846167-01-2, API 300392333100, AUTH TC 8520, AUTH COST \$1323000,
 AMCCC W.I. 1.0000

OPERATIONS: ID 4503-FT, DRL, 902

ATTACHMENT #1

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MUD: DEPTH 4493 FT, LSND POLYMER, 3.8 PPG, VISC. 55, FL 7.2, PH 8.3, PV 20,
 YP 12, GELS 12/23, SOLIDS 3.72, CL 400, CA 50, MST 13.0, PF 3.3, MF 0.7
 BIT AND HYDRAULICS: BIT #000006, 8.750 IN, 283T, JETS 12/12/12/-, 913 FT,
 22.75 HRS, WOB 22, 78 RPM, SERIAL #1014138, PP 1200 PSI,
 PMP #1: SIZE 5.00 X 8.00 X 102 SPM
 DEVIATION: DEPTH 3806 FT, INCL 0.75 DEG, DIR NOOE
 DEPTH 336 FT, INCL 1.00 DEG, DIR NOOE
 TIME: DRL 22.25, SURVEY 1.00, SERVICE RIG 0.75
 COSTS: DAILY WELL \$5839, CUM WELL \$60206
 MUD ADDITIVES: TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 3800.00 GEL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 310.00 STARCH LB,
 TYPE-THINNERS, DISPERSANTS, 7.00 777 GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 3.00 LOSOL QT,
 TYPE-ALKALINITY, PH CONTROL, 100.00 SCDA ASH LB,
 TYPE-ALKALINITY, PH CONTROL, 50.00 CAUSTIC LB,
 TYPE-BIOCIDES, 10.00 B446 GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00	-	000002, DRL
0.25	-	000021, SERVICE RIG
1.25	-	000002, DRL
0.30	-	000006, SURVEY
6.00	-	000002, DRL
0.25	-	000021, SERVICE RIG
7.25	-	000002, DRL
0.25	-	000021, SERVICE RIG
0.75	-	000002, DRL
0.50	-	000006, SURVEY
1.50	-	000002, DRL

*** 11/26/35 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, FOUR CORNERS 4, AMCCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
 AMCCO W-I-1-0000
 OPERATIONS: TD 5435 FT, DRL, 872
 MUD: DEPTH 5356 FT, LSND POLYMER, 8.7 PPG, VISC. 64, FL 8.8, PH 7.0, PV 25,
 YP 12, SOLIDS 3.12, CL 400, CA 160, MST 13.5, PF 0.7, LCM CONC 6 LB/BBL
 BIT AND HYDRAULICS: BIT #000006, 8.750 IN, 283T, JETS 12/12/12/-, 1785 FT,
 45.00 HRS, WOB 22, 75 RPM, SERIAL #1014138, PP 1200 PSI, 7 GPM,
 PMP #1: SIZE 5.00 X 8.00 X 120 SPM
 DEVIATION: DEPTH 4867 FT, INCL 1.50 DEG, DIR NOOE
 DEPTH 5115 FT, INCL 1.75 DEG, DIR NOOE
 TIME: DRL 22.25, SURVEY 1.00, SERVICE RIG 0.75
 COSTS: DAILY WELL \$9591, CUM WELL \$69797
 REMARKS: 5250 FT: WELL DPANK 75 BBL MUD
 MUD ADDITIVES: TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 6800.00 GEL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 800.00 STARCH LB,
 TYPE-INHIBITORS FOR CORROSION, 5.00 777 GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 9.00 LOSOL QT,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 5.00 EZ MUD GAL,

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TYPE-ALKALINITY, PH CONTROL, 200.00 SODA ASH LB,
 TYPE-MATERIAL FOR LOST CIRCULATION, 5500.00 MULTISEAL LB,
 TYPE-ALKALINITY, PH CONTROL, 50.00 CAUSTIC LB,
 TYPE-MATERIAL FOR LOST CIRCULATION, 1240.00 CEDAR FIBER LB,
 TYPE-OTHER, 10.00 B446 GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 0.50 - 000002, DRL
 0.50 - 000005, SURVEY
 0.75 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 0.25 - 000002, DRL
 0.50 - 000005, SURVEY
 2.00 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 0.75 - 000002, DRL

*** 11/27/85 ***

JICARILLA TRIBAL 519 NG. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 3766 FT, DRL, 331
 MUD: DEPTH 5729 FT, LSN POLYMER, 8.8 PPG, VISC. 54, FL 7.2, PH 7.6, PV 19,
 YP 15, GELS 6/8, SOLIDS 3.7%, CL 300, CA 100, MBT 13.0, MF 1.2

BIT AND HYDRAULICS: BIT #000006, 8.750 IN, 2B3T, JETS 12/12/12/-,
 DEPTH OUT 5498 FT, 1848 FT, 48.00 HRS, WOB 22, 75 RPM, SERIAL #104TBD,
 PP 1200 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

BIT #000007, 8.750 IN, FP52, JETS 12/12/ /, 268 FT, 13.00 HRS, WOB 42,
 75 RPM, SERIAL #Q43010, PP 1800 PSI, 7 GPM,
 PMP #1: SIZE 6.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 3458 FT, INCL 1.25 DEG, DIR NOOE

TIME: DRL 16.00, TRIP 0.25, SURVEY 0.25, CIRC 0.75, SERVICE RIG 0.25,

CUT DRL LINE 0.75, OTHER: 0.75 HRS

COSTS: DAILY WELL \$7431, CUM WELL \$77223

MUD ADDITIVES: TYPE-VISCOIFIERS, 3500.00 GEL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 5.00 EZ MUD GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 1450.00 STARCH LB,
 TYPE-MATERIAL FOR LOST CIRCULATION, 120.00 CEDAR FIBER LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 2.00 LOSOL QT,
 TYPE-MATERIAL FOR LOST CIRCULATION, 150.00 COTTON HULLS#,
 TYPE-ALKALINITY, PH CONTROL, 600.00 SODA ASH LB,
 TYPE-DEFOAMERS, 50.00 ALUM STARATE LB,
 TYPE-BIODES, 5.00 B466 GAL,
 TYPE-OTHER, 25.00 GRISS LB,
 TYPE-ALKALINITY, PH CONTROL, 100.00 CAUSTIC LB,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
 1.00 - 000002, DRL

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0.75 - 000019, CIRC FOR SAMP
 0.00 - 000005, SURVEY
 0.00 - 000004, PULL CUT HOLE
 0.00 - 000022, CUT DRL LINE
 0.00 - 000004, TI
 0.00 - 000024, WASH 52 FT TO 2TM
 7.75 - 000002, DRL
 0.00 - 000021, SERVICE RIG
 0.75 - 000002, DRL

*** 11/28/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CGST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 6146 FT, DRL, FM PT LOCKOUT, 380
 MUD: DEPTH 6111 FT, LSND POLYMER, 8.9 PPG, VISC. 55, FL 6.4, PH 9.5, PV 16,
 YP 15, GELS 3/24, SOLIDS 4.1%, CL 400, CA 100, MBT 13.0, FILTER CAKE 2,
 PF 8.3, MF 2.4
 BIT AND HYDRAULICS: BIT #00007, 8.750 IN, FP52, JETS 12/12/-/-, 148 FT,
 35.75 HRS, WOB 40, 75 RPM, SERIAL #U43010, PP 1800 PSI, 7 GPM,
 PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 DEVIATION: DEPTH 5900 FT, INCL 0.50 DEG, DIR NOOE
 TIME: DRL 22.75, SURVEY 0.50, SERVICE RIG 0.75
 COSTS: DAILY WELL \$18448, CUM WELL \$93676
 MUD ADDITIVES: TYPE-VISCOUSIFIERS, 5600.00 GEL LB,
 TYPE-INHIBITORS FOR CORROSION, 7.00 415 GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRGL), 10.00
 EASY MUD GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRGL), 1450.00 STARCH LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRGL), 12.00 LOSOL QT,
 TYPE-ALKALINITY, PH CONTROL, 5000.00 SODA ASH LB,
 TYPE-OTHER, 15.00 777 GAL,
 TYPE-BICCIDES, 25.00 8466 GAL,
 TYPE-ALKALINITY, PH CONTROL, 350.00 CAUSTIC LB,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
 0.25 - 000021, SERVICE RIG
 7.75 - 000002, DRL
 0.25 - 000021, SERVICE RIG
 4.00 - 000002, DRL
 0.50 - 000006, SURVEY
 3.25 - 000002, DRL
 0.50 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 0.25 - 000002, DRL

*** 11/29/85 ***

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JICARILLA TRIBAL 519 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000
 OPERATIONS: TD 5432 FT, PSTD 6145, TRIP, FM SN X MANCOR SH, 286
 MUD: DEPTH 5432 FT, LSND POLYMER, 8.8 PPG, VISC. 53, FL 7.4, PH 9.5, PV 10,
 YP 13, GELS 3/23, SOLIDS 3.82, CL 400, CA 30, MBT 13.0, FILTER CAKE 2,
 PF 0.5, MF 1.9

BIT AND HYDRAULICS: BIT #00007, 8.750 IN, FP52, JETS 12/12/-/-,
 DEPTH CUT 5432 FT, 92 FT, 14.90 HRS, WCE 40, 70 RPM, SERIAL #U43010,
 PP 1300 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 BIT #00008, 8.750 IN, SBC, JETS 12/12/12/-, SERIAL #12828A

DEVIATION: DEPTH 5418 FT, INCL 1.50 DEG, DIR NOOE
 TIME: DRL 20.25, TRIP 1.50, SURVEY 0.50, CIRC 1.00, SERVICE RIG 0.75
 COSTS: DAILY WELL \$7220, CUM WELL \$100896

MUD ADDITIVES: TYPE-VISCO-SIFIERS, 3400.00 GEL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 300.00 STARCH LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 6.00 LOSOL QT,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 300.00 SODA ASH LB,
 TYPE-ALKALINITY, PH CONTROL, 300.00 SODA ASH LB,
 TYPE-BIGGIDES, 120.00 8400 GAL,
 TYPE-THINNERS, DISPERSANTS, 350.00 ALDACIDE LB,
 TYPE-MATERIAL FOR LOST CIRCULATION, 200.00 MULTISEAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 5.00 EASY MUD GAL,
 TYPE-INHIBITORS FOR CORROSION, 10.00 415 GAL,
 TYPE-MATERIAL FOR LOST CIRCULATION, 200.00 CEDER FIBER LB,
 TYPE-MATERIAL FOR LOST CIRCULATION, 100.00 COTTON HULLS LB,
 TYPE-OTHER, 15.00 777 GAL,
 TYPE-MATERIAL FOR WEIGHTING, 2000.00 BAREID,

CHRON TIME DISTRIBUTION (HRS):
 2.00 - 000002, DRL
 0.25 - 000021, SERVICE RIG
 7.75 - 000002, DRL
 0.25 - 000021, SERVICE RIG
 7.75 - 000002, DRL
 0.25 - 000021, SERVICE RIG
 2.75 - 000002, DRL
 1.00 - 000019, CIRC SAMPLES
 0.50 - 000006, DROP SURVEY
 1.50 - 000004, TRIP

*** 11/30/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000
 OPERATIONS: TD 7190 FT, DRL, FM GLLP, 758
 MUD: DEPTH 7132 FT, LSND POLYMER, 3.8 PPG, VISC. 57, FL 7.0, PH 9.5, PV 27,
 YP 23, GELS 15/37, SOLIDS 3.5%, CL 300, CA 30, MBT 15.0, PF 7.2, MF 2.4
 BIT AND HYDRAULICS: BIT #00008, 8.750 IN, SBC, JETS 12/12/12/-, 758 FT,
 13.50 HRS, WCE 22, 75 RPM, SERIAL #12828A, PP 1200 PSI, 7 GPM,

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PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 DEVIATION: DEPTH 5570 FT, INCL 3.75 DEG, DIR NOOE
 DEPTH 5823 FT, INCL 3.25 DEG, DIR NOOE
 TIME: DRL 18.00, TRIP 3.50, SURVEY 1.00, SERVICE RIG 0.50, OTHER: 0.50 HRS
 COSTS: DAILY WELL \$9912, CUM WELL \$110808
 MUD ADDITIVES: TYPE-VISCOSSIFIERS, 4100.00 GEL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 300.00 STARCH LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 6.00 LOSOL QT,
 TYPE-ALKALINITY, PH CONTROL, 400.00 SODA ASH LB,
 TYPE-ALKALINITY, PH CONTROL, 200.00 CAUSTIC LB,
 TYPE-THINNERS, DISPERSANTS, 200.00 ALDACIDE LB,
 TYPE-OTHER, 25.00 ALUM STEK LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 5.00 EASY MUD GAL,
 TYPE-INHIBITORS FOR CORROSION, 12.00 415 GAL,
 TYPE-INHIBITORS FOR CORROSION, 18.00 777 GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00	-	000004, TRIP
1.50	-	000004, TRIP
0.50	-	000037, WASH 54 FT TO BTM
5.50	-	000002, DRL
0.50	-	000006, SURVEY
0.25	-	000021, RIG SERVICE
5.00	-	000002, DRL
0.50	-	000005, SURVEY
2.25	-	000002, DRL
0.25	-	000021, RIG SERVICE
5.75	-	000002, DRL

*** 12/01/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TO 7940 FT, DRL, FM GLLP, 750
 MUD: DEPTH 7362 FT, LSND POLYMER, 9.2 PPG, VISC. 58, FL 7.2, PH 9.5, PV 26,
 YP 20, GELS 8/24, SOLIDS 6.5%, CL 400, CA 90, MBT 16.0, PF 1.5, MF 1.0,
 LCM CONC 4 LB/88L
 BIT AND HYDRAULICS: BIT #000008, 8.750 IN, SBC, JETS 12/12/12/, 1508 FT,
 40.50 HRS, WOB 180, 75 RPM, SERIAL #12828A, PP 1200 PSI, 7 GPM,
 PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 DEVIATION: DEPTH 7321 FT, INCL 2.25 DEG, DIR NOOE
 DEPTH 7448 FT, INCL 2.25 DEG, DIR NOOE
 DEPTH 7544 FT, INCL 2.00 DEG, DIR NOOE
 TIME: DRL 21.75, SURVEY 1.50, SERVICE RIG 0.75
 COSTS: DAILY WELL \$12150, CUM WELL \$122958
 REMARKS: 1100 HR 1600 UNITS GAS, SURVEY 7644 2900 UNITS CONN GAS
 MUD ADDITIVES: TYPE-VISCOSSIFIERS, 4000.00 GEL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 200.00 STARCH LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 6.00 LOSOL QT,
 TYPE-ALKALINITY, PH CONTROL, 300.00 SODA ASH LB,

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TYPE-INHIBITORS FOR CORROSION, 100.00 DESCO LB,
 TYPE-BITCIDES, 300.00 BICARB LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 5.00 EASY MUD GAL,
 TYPE-ALKALINITY, PH CONTROL, 150.00 CAUSTIC LB,
 TYPE-INHIBITORS FOR CORROSION, 9.00 35 GAL,
 TYPE-INHIBITORS FOR CORROSION, 20.00 777 GAL,
 TYPE-OTHER, 8.00 415 GAL,
 TYPE-MATERIAL FOR LOST CIRCULATION, 1200.00 CEDER FIBER,
 TYPE-MATERIAL FOR LOST CIRCULATION, 8950.00 MULTISEAL,
 TYPE-OTHER, 120.00 ALUM STERATE LB,

CHRON TIME DISTRIBUTION (HRS):

2.00	-	000002, DRL
0.25	-	000021, RIG SERVICE
1.50	-	000002, DRL
0.50	-	000006, SURVEY
4.25	-	000002, DRL
0.50	-	000006, SURVEY
1.00	-	000002, DRL
0.25	-	000021, RIG SERVICE
4.50	-	000002, DRL
0.50	-	000006, SURVEY
2.75	-	000002, DRL
0.25	-	000021, RIG SERVICE
5.75	-	000002, DRL

*** 12/02/85 ***

JICARILLA TRIBAL 519 NC. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH ID 8520, AUTH COST \$1323000,
 AMOCO W.I. 1.0000

OPERATIONS: TD 8333 FT, TRIP, FM GREENHORN, 393
 MUD: DEPTH 8333 FT, LSND POLYMER, 3.9 PPG, VISC. 57, FL 8.0, PH 8.9, PV 14,
 YP 11, GELS 5/27, SCLIDS 4.9%, CL 400, CA 100, MBT 15.0, PF 0.3, MF 1.3
 BIT AND HYDRAULICS: BIT #000008, 8.750 IN, STRATA, JETS 12/12/12/-,
 DEPTH OUT 8333 FT, 1905 FT, 54.75 HRS, WOB 20, 75 RPM, SERIAL #12828A,
 PP 1300 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 BIT #000009, 8.750 IN, HP53, JETS 13/13/-/-, SERIAL #0000071393
 DEVIATION: DEPTH 7947 FT, INCL 0.75 DEG, DIR NOOE
 DEPTH 8293 FT, INCL 1.25 DEG, DIR NOOE
 TIME: DRL 14.25, TRIP 7.00, SURVEY 1.00, CIRC 1.50, SERVICE RIG 0.25
 COSTS: DAILY WELL \$6572, CUM WELL \$129530
 MUD ADDITIVES: TYPE-VISCOUSIFIERS, 5000.00 GEL LB,

TYPE-INHIBITORS FOR CORROSION, 7.00 415 GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 250.00 STARCH LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 5.00 EASY MUD GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 6.00 LOSOL QT,
 TYPE-MATERIAL FOR LOST CIRCULATION, 200.00 CEDER FIBER,
 TYPE-ALKALINITY, PH CONTROL, 300.00 SCDA ASH LB,
 TYPE-MATERIAL FOR LOST CIRCULATION, 520.00 MULTISEAL LB,
 TYPE-ALKALINITY, PH CONTROL, 150.00 CAUSTIC LB,

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TYPE-BIOCIDES, 350.00 ALDISIDE LB,
 TYPE-INHIBITORS FOR CORROSION, 25.00 777 GAL,
 TYPE-INHIBITORS FOR CORROSION, 8.00 H35 GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
 0.30 - 000006, SURVEY
 7.75 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 4.50 - 000002, DRL
 1.50 - 000019, CIRC
 0.50 - 000006, SURVEY
 7.00 - 000004, TRIP

*** 12/03/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCC PRODUCTION,

 FLAC 346157-01-3, API 300392333100, AUTH TD 9520, AUTH CCST \$1323000,
 AMOCC W.I. 1.0000

OPERATIONS: TO 8399 FT, REAM TO BTM, 66

MUD: DEPTH 8399 FT, LSND POLYMER, 8.7 PPG, VISC. 80, FL 7.8, PH 9.5, PV 27,
 YF 25, GELS 12/33, SOLIDS 3.1%, CL 400, CA 150, MFT 16.0, FILTER CAKE 2,
 PF 0.7, WF 2.4

BIT AND HYDRAULICS: BIT #00009, 8.75 IN, HP53, JETS 13/13/13/-,
 DEPTH OUT 8399 FT, 66 FT, 8.25 HRS, WOB 40, 60 RPM, CCNDITION 8/8/-/-,
 SERIAL #0000071393, PP 1700 PSI, 7 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

BIT #00010, 9.750 IN, F4, JETS 13/13/8 /- , SERIAL #EX8593, PP 1700 PSI,
 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

TIME: DRL 9.25, TRIP 10.25, SERVICE RIG 0.25, CUT DRL LINE 1.25, REAMING 2.00,
 OTHER: 1.00 HRS

CGSTS: DAILY WELL \$11442, CUM WELL \$140972

REMARKS: -/-/4300 BG/CG/TG: MORE BIT #9 CUT IN 66 FT

MUD ADDITIVES: TYPE-VISCOUSIFIERS, 3000.00 GEL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRCL), 5.00 EZE MUD GAL,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRCL), 900.00 STARCH LB,
 TYPE-VISCOUSIFIERS, 4.00 LOSOL QT,
 TYPE-CALCIUM TREATMENT, 150.00 ALDACIDE LB,
 TYPE-INHIBITORS FOR CORROSION, 16.00 777 GAL,
 TYPE-ALKALINITY, PH CONTROL, 50.00 CAUSTIC LB,
 TYPE-FOAMING AGENTS, 10.00 35 GAL,
 TYPE-ALKALINITY, PH CONTROL, 100.00 SODA ASH LB,
 TYPE-INHIBITORS FOR CORROSION, 6.00 415 GAL,
 TYPE-MATERIAL FOR WEIGHTING, 3900.00 BARCID LB,

CHRON TIME DISTRIBUTION (HRS):

1.50 - 000004, TRIP
 1.00 - 000037, WASH 63 FT TO BTM
 2.75 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 4.50 - 000002, DRL
 2.00 - 000002, DRL

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3.25 - 000004, TRIP
1.00 - 000002, CUT DRL LINE
1.00 - 000004, TRIP
4.00 - 000004, TRIP
2.00 - 000024, REAM 40 FT TO BTM

*** 12/04/85 ***

JICAPILLA TRIBAL 519 NC. 1, WILDCAT, FOUR CORNERS 4, AMCCO PRODUCTION,

FLAC 946167-01-3, API 200392333100, AUTH TD 8523, AUTH COST \$1323000,
AMCCO W.I. 1.0000

OPERATIONS: TD 8517 FT, DRL, FM DKGT, 118

MUD: DEPTH 8509 FT, LSND POLYMER, 9.1 PPG, VISC. 50, FL 6.6, PH 9.3, PV 22,
YP 19, GELS 7/27, SOLIDS 6.0%, CL 400, CA 80, MBT 15.0, FILTER CAKE 2,
PF 0.4, MF 0.2BIT AND HYDRAULICS: BIT #00010, 8.750 IN, F4, JETS 13/13/-/-, 118 FT,
21.25 HRS, WOB 40, 60 RPM, SERIAL #EX6593, PP 1500 PSI, 7 GPM,
PMP #1: SIZE 8.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 3482 FT, INCL 0.50 DEG, DIR NOOE

TIME: DRL 21.25, TRIP 0.75, SERVICE RIG 0.50, REAMING 0.50, OTHER: 1.00 HRS

CCSTS: DAILY WELL \$18216, CUM WELL \$159188

MUD ADDITIVES: TYPE-VISCOUSIFIERS, 4400.00 GEL LB,
TYPE-OTHER, 25.00 ALUM ST LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRL), 350.00 STARCH LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRL), 5.00 EZ MUD GAL,
TYPE-BIOCIDES, 450.00 ALDACIDE LB,
TYPE-VISCOUSIFIERS, 5.00 LGSOL QT,
TYPE-ALKALINITY, PH CONTROL, 200.00 CAUSTIC LB,
TYPE-INHIBITORS FOR CORROSION, 28.00 777 GAL,
TYPE-ALKALINITY, PH CONTROL, 400.00 SCDA ASH LB,
TYPE-INHIBITORS FOR CORROSION, 14.00 H-35 GAL,
TYPE-INHIBITORS FOR CORROSION, 4.00 415 GAL,
TYPE-OTHER, 5.00 DEFOAM GAL,
TYPE-OTHER, 45.00 DIESEL GAL,

CHRON TIME DISTRIBUTION (HRS):

0.50 - REAM TO BTM
1.50 - 000002, DRL
0.50 - 000004, PULL 5 STDS
1.00 - 000031, REPLACE KELLY HOSE
0.25 - 000004, TI 5 STDS
0.75 - 000002, DRL
4.75 - 000002, DRL
0.25 - 000021, RIG SERVICE
3.00 - 000002, DRL
1.50 - 000002, DRL
0.25 - 000021, RIG SERVICE
5.75 - 000002, DRL

*** 12/05/85 ***

JICARILLA TRIBAL 519 NC. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846167-01-3, API 360392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8615 FT, DRL, 98

MUD: DEPTH 8639 FT, LSND POLYMER, 8.9 PPG, VISC. 65, FL 7.0, PH 9.5, PV 23,
 YP 21, GELS 12/39, SOLIDS 4.1%, CL 400, CA 120, MBT 15.0, FILTER CAKE 2,
 PF 0.0, MF 2.0

BIT AND HYDRAULICS: BIT #00010, 8.750 IN, F4, JETS 13/13/-/-,
 DEPTH OUT 8519 FT, 100 FT, 21.75 HRS, WOB 40, 60 RPM, CONDITION 6/2/-/-,
 SERIAL #EX0593, PP 1600 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM
 BIT #00011, 8.750 IN, F57, JETS 13/13/-/-, 96 FT, 12.50 HRS, WOB 40,
 60 RPM, SERIAL #FC1147, PP 1600 PSI, 7 GPM,
 PMP #1: SIZE 6.00 X 8.00 X 102 SPM

TIME: DRL 14.25, TRIP 7.25, SURVEY 0.25, CIRC 1.50, SERVICE RIG 0.25,
 OTHER: 0.25 HRS

CCSTS: DAILY WELL \$15177, CUM WELL \$174365

BOTTOM HOLE ASSEMBLY: DEPTH IN 3519 FT,

DP OR TBG: GB 4.500

BHA DETAIL: COLLAR, 1.000 FT, OD 8.314 IN, MANUFACTURER BIT SMITH F-57

COLLAR, 3.000 FT, STEEL, OD 6.000 IN, ID 3.250 IN,

MANUFACTURER JUNK BASKET

SHOCK SUB, 10.340 FT, STEEL, OD 6.000 IN, ID 2.250 IN,

MANUFACTURER SHOCK SUB

OTHER, 3.000 FT, STEEL, OD 6.250 IN, ID 2.250 IN,

MANUFACTURER BIT SUB

COLLAR, 618.200 FT, STEEL, OD 6.313 IN, ID 3.250 IN,

MANUFACTURER 20 DCS

DRILL PIPE & HW, 121.360 FT, STEEL, OD 4.500 IN, ID 2.500 IN,

MANUFACTURER WEIGHT PIPE

OTHER, STEEL, OD 4.500 IN, MANUFACTURER DP

MUD ADDITIVES: TYPE-VISCOUSIFIERS, 3000.00 GEL LB,
 TYPE-MATERIAL FOR WEIGHTING, 2000.00 BAR LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRCL), 300.00 STARCH LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRCL), EZ MUD GAL
 TYPE-BICCIDES, 450.00 ALDACIDE LB,
 TYPE-VISCOUSIFIERS, 3.00 LOSOL QT,
 TYPE-ALKALINITY, PH CONTROL, 150.00 CAUSTIC LB,
 TYPE-INHIBITORS FOR CORROSION, 20.00 777 GAL,
 TYPE-ALKALINITY, PH CONTROL, 300.00 SCDA ASH LB,
 TYPE-INHIBITORS FOR CORROSION, 8.00 H-35 GAL,
 TYPE-DEFCAMERS, 25.00 ALUM STARATE LB,
 TYPE-DEFCAMERS, 10.00 DEFCAMER GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
 1.50 - 000019, CIRC FOR SAMP
 0.25 - 000037, SLUG PIPE
 0.25 - 000006, SURVEY
 6.00 - 000004, TRIP BIT
 1.25 - 000004, TI
 0.75 - 000002, DRL

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0.25 - 000021, RIG SERVICE
 1.75 - 000002, DRL

*** 12/06/85 ***

JICARILLA TRIBAL 519 NC. 1, WILDCAT, FOUR CORNERS 4, AMCCC PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
 AMCCC W.I. 1.0000

OPERATIONS: TD 8700 FT, TRIP, 85

MUD: DEPTH 8700 FT, LSND POLYMER, 8.9 PPG, VISC. 54, FL 6.6, PH 9.5, PV 20,
 YP 15, GELS 9/32, SOLIDS 4.6%, CL 400, CA 120, MBT 15.0, PF 0.4, MF 2.3

BIT AND HYDRAULICS: BIT #00011, 8.750 IN, F57, JETS 13/13/-/-,
 DEPTH OUT 8700 FT, 181 FT, 28.00 HRS, WCB 40, 60 RPM, SERIAL #FC2147,
 PP 1600 PSI, 296 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 GPM

TIME: DRL 15.50, TRIP 4.50, SURVEY 0.25, CIRC 3.50, SERVICE RIG 0.25
 COSTS: DAILY WELL \$15735, CUM WELL \$190100

MUD ADDITIVES: TYPE-VISCOSSIFIERS, 8000.00 GEL LB,
 TYPE-MATERIAL FOR WEIGHTING, 50.00 EGTION HULL LB,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRCL), 550.00 STARCH LB,
 TYPE-MATERIAL FOR LOST CIRCULATION, 400.00 CEDAR FIBER,
 TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRCL), 5.00 EZ MUD GAL,
 TYPE-BIODES, 250.00 ALDACIDE LB,
 TYPE-VISCOSSIFIERS, 14.00 LUSOL QT,
 TYPE-DEFCAMERS, 50.00 ALUM STARATE LB,
 TYPE-ALKALINITY, PH CONTROL, 250.00 CAUSTIC LB,
 TYPE-INHIBITORS FOR CORROSION, 30.00 777 GAL,
 TYPE-ALKALINITY, PH CONTROL, 900.00 SODA ASH LB,
 TYPE-INHIBITORS FOR CORROSION, 11.00 H-35 GAL,
 TYPE-DEFCAMERS, DEFCAMER GAL,
 TYPE-THINNERS, DISPERSANTS, 75.00 DESCC LB,
 TYPE-OTHER, 5.00 415 GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 7.75 - 000002, DRL
 5.75 - 000002, DRL
 1.25 - 000019, CIRC SAMPLE
 1.00 - 000004, SHORT TRIP
 2.00 - 000019, CIRC
 0.25 - 000006, SURVEY
 4.75 - 000004, TC FOR LOGS

*** 12/07/85 ***

JICARILLA TRIBAL 519 NC. 1, WILDCAT, FOUR CORNERS 4, AMCCC PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
 AMCCC W.I. 1.0000

OPERATIONS: TD 8700 FT, LOG, FM DKOT

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MUD: DEPTH 8700 FT, LONG POLYMER, 8.9 PPG, VISC. 69, FL 6.4, PH 9.5, PV 22,
YP 20, GELS 3/32, SOLIDS 4.2%, CL 270, CA 40, MBT 15.0, PF 0.5, MF 2.3,
PM 1.2

TIME: TRIP 8.50, LOGGING 12.50, CIRC 3.00

CCSTS: DAILY WELL \$5768, CUM WELL \$195868

REMARKS: LOGGERS HIT BRIDGE AT 4205 FT; TI: CIRC X COND

MUD ADDITIVES: TYPE-VISCOSSIFIERS, 10.00 EZMUD GAL,
TYPE-RHODOSSES, 300.00 ALDICE LB,
TYPE-ALKALINITY, PH CONTROL, 50.00 CAUSTIC LB,
TYPE-THINNERS, DISPERSANTS, 25.00 DESCO LB,

CHRON TIME DISTRIBUTION (HRS):

1.35 - 000004, TO FOR LOG
1.00 - 000017, RU LOGGERS
1.75 - 000017, BRIDGE AT 4205
3.25 - 000004, TI BREAK CIRC 4787
3.00 - 000020, CIRC X COND MUD
4.25 - 000004, TO FOR LOGS
5.75 - 000017, RU LOGGERS
6.00 - 000017, LOG

LOGS: 12/07/85, ACOUSTIC LOG,

TOP DEPTH 508 FT, BTM DEPTH 7830 FT, BHT 198 F,
SERVICE COMPANY-SCHLUMBERGER

12/07/85, CALIPER LOG,

TOP DEPTH 508 FT, BTM DEPTH 8700 FT, BHT 198 F,

SERVICE COMPANY-SCHLUMBERGER

12/07/85, NEUTRON POROSITY LOG,

TOP DEPTH 508 FT, BTM DEPTH 8700 FT, BHT 198 F,

SERVICE COMPANY-SCHLUMBERGER

12/07/85, DENSITY LOG,

TOP DEPTH 508 FT, BTM DEPTH 8700 FT, BHT 198 F,

SERVICE COMPANY-SCHLUMBERGER

12/07/85, GAMMA RAY LOG,

TOP DEPTH 508 FT, BTM DEPTH 8700 FT, BHT 198 F,

SERVICE COMPANY-SCHLUMBERGER

12/07/85, DIPMETER,

TOP DEPTH 5000 FT, BTM DEPTH 7830 FT, BHT 198 F,

SERVICE COMPANY-SCHLUMBERGER

12/07/85, INDUCTION LOG,

TOP DEPTH 508 FT, BTM DEPTH 8700 FT, BHT 198 F,

SERVICE COMPANY-SCHLUMBERGER

12/07/85, SPONTANEOUS POTENTIAL LOG,

TOP DEPTH 508 FT, BTM DEPTH 8700 FT, BHT 198 F,

SERVICE COMPANY-SCHLUMBERGER

*** 12/08/85 ***

JICARILLA TRIBAL 519 NG. 1, WILDCAT, FOUR CORNERS 4, AMOCC PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMCCC W.I. 1.0000

OPERATIONS: TD 8700 FT, REPAIR RIG

TIME: TRIP 2.50, RIG REPAIR 5.00, LOGGING 15.75, CUT DRL LINE 0.75
 COSTS: DAILY WELL \$20100, CUM WELL \$201000
 CHRON TIME DISTRIBUTION (HRS):
 2.50 - 000017, LOG
 5.00 - 000017, LOG
 15.75 - 000017, LOG
 0.75 - 000004, TI
 0.75 - 000022, CUT DRL LINE
 1.00 - 000004, TI
 1.00 - 000004, TI
 1.00 - 000005, RIG REPAIR

000 12/09/85 000

JICARILLA TRIBAL 519 NG-1, WILDCAT, FOUR CORNERS 4, AMCCO PRODUCTION,
 FLAC 846167-01-3, API 300392333100, AUTH TO 8520, AUTH COST \$1323000,
 AMCCO W.I. 1.0000
 OPERATIONS: TO 3700 FT, IL, FM SKBT
 MUD: DEPTH 3700 FT, LSND POLYMER, 8.9 PPG, VISC. 80, FL 7.2, PH 9.0, PV 25,
 YP 25, GELS 3/30, SOLIDS 4.2%, CL 250, CA 60, MET 15.0, PF 0.4, MF 2.0,
 PH 11.2
 TIME: TRIP 8.50, RIG REPAIR 6.00, LOGGING 6.00, CEND MUD 3.50
 COSTS: DAILY WELL \$12656, CUM WELL \$213741
 MUD ADDITIVES: TYPE-OTHER, 150.00 SPA LB,
 TYPE-ALKALINITY, PH CONTROL, 50.00 CAUSTIC LB,
 TYPE-INHIBITORS FOR CORROSION, 175.00 DRISCO LB,

CHRON TIME DISTRIBUTION (HRS):
 2.00 - 000005, RIG REPAIR
 4.00 - 000005, RIG REPAIR
 2.00 - 000004, TI
 2.00 - 000020, CIRC MUD
 0.50 - 000020, CIRC MUD
 4.00 - 000004, TC
 2.50 - 000017, RU X LOG
 3.00 - 000017, LOG
 0.50 - 000017, RD LOGGERS
 2.50 - 000004, TI

000 12/10/85 000

JICARILLA TRIBAL 519 NG-1, WILDCAT, FOUR CORNERS 4, AMCCO PRODUCTION,
 FLAC 846167-01-3, API 300392333100, AUTH TO 8520, AUTH COST \$1323000,
 AMCCO W.I. 1.0000
 OPERATIONS: TO 3700 FT, CIRC BETWEEN STAGES
 MUD: DEPTH 3700 FT, LSND POLYMER, 9.0 PPG, VISC. 45, FL 6.5, PH 9.0, PV 19,
 YP 4, GELS 2/11, SOLIDS 4.3%, CL 230, CA 60, MET 13.7, FILTER CAKE 2,
 PF 0.4, MF 2.1, PH 11.5
 TIME: TRIP 2.50, CSG & CH 4.50, CMT SQZ 2.00, CIRC 7.00, LD LP & DC 7.00,

OTHER: 1.00 HRS

COSTS: DAILY WELL \$5150, CUM WELL 3218901

CASING: PRODUCTION, SET 8703 FT, 12/10/85

MUD ADDITIVES: TYPE-INHIBITORS FOR CORROSION, 400.00 BRISCE LB,

CHRON TIME DISTRIBUTION (HRS):

2.50 - 000004, TRIP
3.00 - 000019, CIRC X COND MUD
7.00 - 000029, LDDP X DC
1.00 - 000037, CHANGE RAMS
4.50 - 000011, RUN 1-1/2 INCH CSG
2.50 - 000019, CIRC
2.00 - 000011, CMT 1ST STAGE
1.50 - 000019, OPEN DV X CIRC

DETAIL: BOTTOM 37.4 FT, 5.500 IN, WT 17.00 #/FT,
GRADE P110, CONNECTION HYDRIL S EU, NO OF JTS. 1
TOP 37.4 FT, BOTTOM 3779.0 FT, 5.500 IN, WT 17.00 #/FT,
GRADE N80, CONNECTION HYDRIL S EU, NO OF JTS. 88
TCP 3779.0 FT, BOTTOM 8703.1 FT, 5.500 IN, WT 17.00 #/FT,
GRADE P110, CONNECTION HYDRIL S EU, NO OF JTS. 124

TOOLS: TYPE-DV TOOL, TOP 5602.2 FT, BOTTOM 5603.4 FT,
NO. OF TOOLS 1, NAME-DV TOOL
TYPE-FLOAT COLLAR, TOP 8659.9 FT, BOTTOM 8660.9 FT,
NO. OF TOOLS 1, NAME-FLOAT COLLAR
TYPE-FLOAT SHOE, TOP 8701.1 FT, BOTTOM 8703.1 FT,
NO. OF TOOLS 1, NAME-FLOAT GUIDE SHOE

PRIMARY CEMENTING REPORT: STAGE 1, BATCH 1, API CLASS B,
IDEAL, VOL 157 SX,
SLURRY DENSITY 12.0 PPG,
HOLE FLUID DENSITY 9.0 PPG, TYPE-MUD,
AVG. DISPLACEMENT PRES 1000 PSI,
AVG. DISPLACEMENT RATE 6.0 BPM,
PRE-FLUSH WATER, 33 BBLs, DENSITY 8.4 PPG,
DISPLACEMENT FLUID-MUD, DENSITY 9.0 PPG,
PIPE MOVEMENT-RECIPROCAT, RETURN FLOW 99.0%
STAGE 1, BATCH 2, API CLASS B,
IDEAL, VOL 637 SX,
SLURRY DENSITY 13.9 PPG,
HOLE FLUID DENSITY 9.0 PPG, TYPE-MUD,
AVG. DISPLACEMENT PRES 1000 PSI,
AVG. DISPLACEMENT RATE 5.0 BPM,
DISPLACEMENT FLUID-MUD, DENSITY 9.0 PPG,
PIPE MOVEMENT-RECIPROCAT, RETURN FLOW 99.0%
STAGE 2, BATCH 3, API CLASS B,
IDEAL, VOL 1100 SX,
SLURRY DENSITY 12.0 PPG,
HOLE FLUID DENSITY 9.0 PPG, TYPE-MUD,
AVG. DISPLACEMENT PRES 1000 PSI,
AVG. DISPLACEMENT RATE 4.5 BPM,
PRE-FLUSH WATER, 20 BBLs, DENSITY 8.4 PPG,
DISPLACEMENT FLUID-WATER, DENSITY 8.4 PPG,

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VOL CIRC. OUT 338 BBLs,
RETURN FLOW 75.0%

ADDITIVES:

TYPE-WEIGHT REDUCER, FLY ASH 35.00 %
TYPE-WEIGHTING MATERIAL, GEL 6.00 %
TYPE-LOST CIRCULATION CONTROL, CELLULOSE FLAKE 0.25 LB PER SX
TYPE-DISPERSANT OR FRICTION REDUCER, D-17 0.50 %
TYPE-OTHER, 50-50 PC2 50.00 %
TYPE-WEIGHT REDUCER, FLY ASH 35.00 %
TYPE-WEIGHTING MATERIAL, GEL 6.00 %
TYPE-LOST CIRCULATION CONTROL, TUFF PLUG 2.00 LB PER SX

*** 12/11/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8700 FT, RREL: SI; WOSU

TIME: CSG & CMT 2.00, CIRC 2.50, ND 1.50, RIG DOWN 4.00

COSTS: DAILY WELL \$135601, CUM WELL \$354502

REMARKS: RREL 1500 HR 122085; BMP PLUG ON 1ST STAGE CMT; HELD OK;

OPEN DV TOOL; CIRC 4 HR AFTER PLUG ON; MIX X PMP STAGE 2

383 BBL SLURRY X GOOD RETURNS; SD; DROP PLUG PMP 30 BBL OF

1300 BBL DISP; LOST RETURNS; BMP PLUG; PLUG HELD OK; SET

SLIPS X 132000#; CUT OFF CSG; RDRT; RAN TEMP SURVEY; FOUND

CMT TOP 3300 FT; TAG CMT ON TOP OF DV 5575; DV TOOL AT 5600

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000019, CIRC MUD STAGE 2

0.50 - 000019, CIRC MUD STAGE 2

2.00 - 000011, CMT STAGE 2

1.50 - 000027, ND SET SLIPS X CUT OFF

4.00 - 000036, RD

*** 12/13/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8700 FT, SI; WOSU

COSTS: CUM WELL \$554502

*** 12/16/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMOCO W.I. 1.0000

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OPERATIONS: TD 8700 FT, SI: WOSU
COSTS: CUM WELL \$354502

*** 12/17/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8700 FT, SI: WOSU
COSTS: CUM WELL \$354502

*** 12/18/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8700 FT, SI: WOSU
COSTS: CUM WELL \$354502

*** 12/19/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8700 FT, SI: WOSU
COSTS: CUM WELL \$354502

*** 12/20/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8700 FT, SI: WOSU
COSTS: CUM WELL \$354502

*** 12/26/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8700 FT, SI: WOSU
COSTS: CUM WELL \$354502

*** 12/27/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 3700 FT, SI; WOSU
COSTS: CUM WELL \$354502

*** 12/30/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 3700 FT, SI; WOSU
COSTS: CUM WELL \$354502

*** 12/31/85 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 3700 FT, SI; WOSU
PERTINENT DATA: SUSPENDED 12/31/85, RESUMED 04/27/86
COSTS: CUM WELL \$354502

*** 01/02/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 3700 FT, SI; WOSU
COSTS: CUM WELL \$354502

*** 04/23/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 3700 FT, MIRUSU
COSTS: DAILY WELL \$341, CUM WELL \$354843

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04/29/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, WD LCC TO DRY

COSTS: CUM WELL \$354843

REMARKS: ROAD RIG TO LCC; LAST 1 MILE OF ACCESS ROAD X 40 FT AROUND WELL
HEAD MUDDY; TOO MUDDY TO RU

*** 04/30/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, RUSU

PERTINENT DATA: RIG MOVE ON 04/30/86, RIG RELEASED 05/07/86

COSTS: CUM WELL \$354843

REMARKS: PUSH MUD AWAY FROM WELLHEAD; BUILD GRAVEL PAD; INSTALL FRAC
SPOOL: SPOOL RIG NEXT TO WELLHEAD ON PAD

RIG CONTRACT DATA: CONTRACTOR BA CODE 433158, BIG A, RIG #C022, SERVICE

*** 05/01/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, DRL OUT DV TOOL

COSTS: DAILY WELL \$705, CUM WELL \$355548

REMARKS: MIRUSU; UNLOAD X TALLY TBG; RU BOP; 4 INCH BLOW SPOOL X 4 INCH
BLW LINES; PU X TI X 4-3/4 INCH BIT X SCRAPER; BIT SER # T153670
TI; PU X RABBIT 2-7/8 TBG; TAG CMT AT 5518; CLEAN CUT TO 5638;
CIRC CLEAN; SIFN

*** 05/02/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PSTD 8658, SWB DN TO 8000

COSTS: DAILY WELL \$2118, CUM WELL \$357666

REMARKS: DRL DV TOOL; TI; DRL 75 FT CMT; DRL TO 8658; RECIPROCATATE X
ROTATE PIPE X CIRC CLEAN; PR TST CSG 6200; DISP FRESH WTR X
2% KEL; FULL 1 JT; RU SWB EQUIP; MADE 10 RUNS; SWB DN TO 3500

*** 05/03/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 8703 FT, PBTD 8658, SI
 COSTS: DAILY WELL \$1919, CUM WELL \$359585
 REMARKS: SWB FL DN TO 3000; TO X BIT X SCRAPER: SI

*** 05/04/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 8703 FT, PBTD 8658, SI
 COSTS: CUM WELL \$359585

*** 05/05/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 8703 FT, PBTD 8658, SI
 COSTS: DAILY WELL \$2886, CUM WELL \$362471
 PERFORATIONS: 05/05/86, TOP 8576 FT, BOTTOM 8597 FT, TYPE-OPEN,
 SHOTS/FT. 4, PERF DIAM. 0.480 IN, TOTAL NO. SHOT 72,
 GUN-NON-EXPENDABLE, SIZE 4.000 IN, PHASING 120 DEG,
 FLUID TRT-WATER, DENSITY 8.4 PPG, LEVEL 7700 FT

*** 05/06/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 8703 FT, PBTD 8650, SWB: FLW TST, FM DAKOTA
 COSTS: DAILY WELL \$1552, CUM WELL \$364023
 REMARKS: 54 BNW: RUWL RAN 4-3/4 INCH GAUGE RING: UNABLE TO PASS THRU
 DV TGOI AT 3631 FT; PU X RUN 4-1/2 INCH GAUGE RING TO BTM
 AT 8650 FT: 53 FT RAT HOLE; RAN CORR GR LOG FROM TD TO 7000 FT
 PERF ZONE 8573-8597 FT; RD WL PICK UP 2-7/8 INCH NOTCHED
 COLLAR; 1 JT 2-7/8 INCH TBG; BAKER RETR-A-MATIC PKR X TI; SET
 PKR 8528; TBG END 8570 FT; IFL SURF; MADE 10 SWB RUNS; REC
 54 BNW: FFL 700 FT

*** 05/07/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 3703 FT, PBTD 9650, RDSU, FM DAKOTA
CCSTS: DAILY WELL \$4848, CUM WELL \$368871
REMARKS: 72 BNM TCTAL: SITP 0: IFL 300 FT; MADE 3 SWB RUNS PULLING FROM
1600 FT: FFL 400 FT; CAUGHT WT SAMPLES FIRST X LAST RUNS: REC
18 BNM; NO SHOW OF OIL OR GAS; REL PKR; TC; SET CIBP AT
8150; CAP X 2 SX CMT: PR TST CIBP TO 1000 LB 15 MIN; TI X
250 JT 2-7/8 INCH TBG; TBG END AT 7586; LAND TBG HANGER; CLOSE
X LOCK 80PS

*** 05/08/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 3703 FT, PBTD 8650, SI
CCSTS: DAILY WELL \$2877, CUM WELL \$371746

*** 05/09/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8650, SI
CCSTS: CUM WELL \$371748

*** 05/12/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8650, SI
CCSTS: CUM WELL \$371748

*** 05/13/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

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FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PSTD 8650, SI
COSTS: CUM WELL \$371748

*** 05/14/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PSTD 8650, SI
COSTS: CUM WELL \$371748

*** 05/15/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PSTD 8650, SI
COSTS: CUM WELL \$371748

*** 05/16/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PSTD 8650, SI
COSTS: CUM WELL \$371748

*** 05/19/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PSTD 8650, SI
COSTS: CUM WELL \$371748

*** 05/20/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, P8TD 8650, SI
 COSTS: CUM WELL \$371748

*** 05/21/86 ***

JICARILLA TRIBAL 519 NG. 1, WILDCAT, BIG A 22A, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 8703 FT, MIRUSU
 PERTINENT DATA: RIG MOVED ON 05/21/86, RIG RELEASED 05/28/86
 COSTS: CUM WELL \$371748
 REMARKS: ROAD RIG TO LOCATION
 RIG CONTRACT DATA: CONTRACTOR BA CODE 433158, BIG A, RIG #22A, SERVICE
 PERFORATIONS: 05/21/86, TOP 7511 FT, BOTTOM 7704 FT, TYPE OPEN,
 SHOTS/FT. 1, PERF DIAM. 0.480 IN, TOTAL NO. SHOT 194,
 GUN-NON-EXPENDABLE, SIZE 4.000 IN, PHASING 120 DEG,
 DENSITY 8.4 PPG, LEVEL 6300 FT

*** 05/22/86 ***

JICARILLA TRIBAL 519 NG. 1, WILDCAT, BIG A 22A, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 8703 FT, P8TD 8510, PERF, FM GLLP
 COSTS: DAILY WELL \$8689, CUM WELL \$380437
 REMARKS: MIRUSU: PULL OUT OF HOLE X TBG TO 6700; BLW DRY X N2; TO X TBG;
 RU PERF: PERF 7704-7511; 6 RUNS; SIFN
 PERFORATIONS: 05/22/86, TOP 7280 FT, BOTTOM 7510 FT, TYPE OPEN,
 SHOTS/FT. 1, PERF DIAM. 0.480 IN, TOTAL NO. SHOT 231,
 GUN-NON-EXPENDABLE, SIZE 4.000 IN, PHASING 120 DEG,
 FLUID TRT-WATER, DENSITY 8.4 PPG, LEVEL 6200 FT

*** 05/23/86 ***

JICARILLA TRIBAL 519 NG. 1, WILDCAT, BIG A 22A, AMOCO PRODUCTION,

 FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,
 AMOCO W.I. 1.0000
 OPERATIONS: TD 8703 FT, P8TD 8510, FRAC THE GLLP
 COSTS: DAILY WELL \$2310, CUM WELL \$382747
 REMARKS: SICP 10; CONT PERF GLLP; 7 RUNS 7510 TO 7280 FT; FL 6200 FT
 THROUGHOUT JOB: CHECK FRAC WT X SN MASTER; SI FOR NIGHT
 CHRON TIME DISTRIBUTION (HRS):
 8.00 - PERF
 COMPL, RECOMPL, REPAIR OPERATIONS: 05/23/86, TYPE-FLUID TREATMENT,
 TOP DEPTH 7280 FT, BOTTOM 7704 FT
 FLUID TREATMENT: NO. 1, WATER FRAC, 6800 GALS,

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BREAKDOWN PRES 3300 PSI, BREAKDOWN RATE 36.00 BPM,
INJ PRES 4000 PSI, INJ RATE 56.00 BPM,
INJ STRING-CASING, TBC OD 5.500 IN, ID 4.892 IN,
INIT SIIP 2700 PSI,
SIIP AFT 2350 PSI

TREATMENT COMPONENTS:

BASE FLUID,
2% KCL WTR
GELLING AGENT,
J20 GEL, 9150.00 LB
CROSSLINK AGENT,
TIC XLINK, 250.00 GAL
PROPPING AGENT,
20-40 BRADY SN, 400.00 M LB
TRACER MATERIAL,
RA TRACER MAT., 133.00 MILL
EMULSIFIER,
ACUA FLW, 304.00 GAL
OTHER,
BS BREAKER, 250.00 LB
OTHER,
FRAC SIDE, 86.00 GAL

*** 05/24/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22A, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CGST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, SI TO HEAL FRAC, FM GLLP

COSTS: DAILY WELL \$13030, CUM WELL \$395777

REMARKS: BLW 6065; FRAC GLLP ON CSG X 254730 GAL 30# XLINK GEL 2%
X 400000# 20-40 BRADY SN; TAG SN X MILLICURIES RA MATERIAL;
FLUSH X 162 BBL GEL 2% KCL WTR; ISIP 2700; 5 MIN 2400;
10 MIN 2350; 15 MIN 2350; SI TO HEAL FRAC; MAX PR 4150;
AVG PR 3100

CHRON TIME DISTRIBUTION (HRS):

6.00 - PREP TO FRAC
2.50 - FRAC
3.00 - RD FRAC
11.00 - SI

*** 05/25/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22A, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CGST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, FLW BACK FRAC

COSTS: CUM WELL \$395777

REMARKS: BLW 6065; BLWTR 5465; SICP 1700; OPEN TO PIT THRU 1/4 CH

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12 HR REC EST 600 BLW TO PIT; NO SHOW OF OIL; BURNABLE GAS

*** 05/26/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22A, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8510, FLW BACK FRAC
COSTS: CUM WELL \$395777
REMARKS: FCP 703; 1/4 CH; REC TO PIT EST 800 BLW; NO OIL; BURNABLE GAS

*** 05/27/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22A, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8510, TI X TBG
COSTS: DAILY WELL \$1151, CUM WELL \$396928
REMARKS: CP 590; 1/4 CH; OPEN CH 3/4; CP 70; REC 675 BLW; NO OIL;
BURNABLE GAS

*** 05/28/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, BIG A 22A, AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8510, NO BOP; CHG WELLHEAD
COSTS: DAILY WELL \$849, CUM WELL \$397777
CASING: SET 7499 FT, 05/28/86
REMARKS: BLW 6065; BLWTR 3940; TI X 2-7/8 INCH TBG; RAN GAMMA RAY
TRACER SURVEY; TAG SN AT 7985; BTM PERF 7704; 281 FT RAT HOLE;
LAND END OF TBG 7499; MIDDLE OF PERFS; FLW TBG TO PIT FULL
OPEN 2 INCH; REC EST 50 BLW; BURNABLE GAS; CP 420
DETAIL: BOTTOM 7499.0 FT, 2.875 IN, WT 6.50 #/FT,
GRADE J55, CONNECTION 8 RD EUE, NC OF JTS. 237
TOOLS: TYPE-NIPPLE, TOP 7498.0 FT, BOTTOM 7499.0 FT,
NO. OF TOOLS 1, NAME-STAND SEAT NIPPLE

*** 05/29/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8510, FLW TST

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COSTS: DAILY WELL \$1014, CUM WELL \$398791

REMARKS: NO 5000# WELLHEAD X INSTALL 3000# WELLHEAD; RD; MCSU; HOOK UP
FLW LINE X SEP; FLW TO PIT 50 BLW; CP 650; TP 0; EQUALIZED
TSG X CSG; SIFN

CHRON TIME DISTRIBUTION (HRS):

3.00 - CHANGE WELLHEAD
3.00 - RDMCSU

*** 05/30/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, FLW, FM GLLP

COSTS: DAILY WELL \$1256, CUM WELL \$400647

REMARKS: TSG LOGGED OF; SLIGHT BLOW; 1250 CP; EQUALIZED TSG X CSG;
DROP SOAP BAR; WELL WOULD NOT COME AROUND; HOOK UP; BLOW WELL
X N2; KICK TSG OFF; FTP 160; CP 460; STATIC 3.1; DIFF 6;
MCFD 188.7; 24/64 CH; .875 ORFICE; TEMP 55 DEG; 50# SEP PR;
REC TO TANK 35 BLW; FLW TO PIT 35 BLW; REC 70 BLW; NO OIL

CHRON TIME DISTRIBUTION (HRS):

9.00 - 000037, LOG TSG X CSG EQUALIZED
2.00 - 000037, BLOW AROUND X N2
11.00 - 000037, FLW TST

*** 05/31/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, FLW TST

COSTS: CUM WELL \$400647

REMARKS: FTP 60; CP 425; CH 24/64; STATIC 3.1; DIFF 4.3; TEMP 55;
MCFD 135; BLW 43; BNO 0

*** 06/01/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, FLW TST

COSTS: CUM WELL \$400647

REMARKS: FTP 78; CP 390; 24/64 CH; STATIC 3; DIFF 5.5; TEMP 50;
MCFD 167; BLW 41; BNO 0

*** 06/02/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PSTD 8510, FLW TST

COSTS: CUM WELL \$400647

REMARKS: FTP 100; CP 400; MCFD 156; STATIC 2.9; DIFF 5.3; CH 24/64;
24 HR; BLW 19; PLATE .875; SPRING 500; SEP TEMP 50

*** 06/03/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PSTD 8510, FLW TST, FM GLLP

COSTS: DAILY WELL \$20342, CUM WELL \$420989

REMARKS: FTP 85; CP 400; PLATE .875; 4 INCH METER RUN; SEP PR 50;
24/64 CH; TEMP 57; 23 BLW; STATIC 2.9; DIFF 4.7; MCFD 140;

BLW 6065; BLWTR 3695

CHRON TIME DISTRIBUTION (HRS):

24.00 - FLW TST

*** 06/04/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PSTD 8510, FLW TST

COSTS: DAILY WELL \$56462, CUM WELL \$477451

REMARKS: FTP 80; CP 420; 57 MCFD; 24/64 CH; 27 BLW; 0 BNG; STATIC 3.1;
DIFF 5; PLATE .875; 4 INCH METER RUN; SEP TEMP 60 DEG;

SEP PR 50; 24 HR

CHRON TIME DISTRIBUTION (HRS):

24.00 - 000037, FLW TST

*** 06/05/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CCST \$1323000,

AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PSTD 8510, FLW TST

COSTS: DAILY WELL \$575, CUM WELL \$473026

REMARKS: FTP 70; CP 350; MCFD 143; 24/64 CH; 15 BLW; STATIC 3.1;

DIFF 4.5; TEMP 60; PLATE .875

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CHRON TIME DISTRIBUTION (HRS):
24.00 - 000037, FLW

*** 06/06/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, FLW

COSTS: DAILY WELL \$330, CUM WELL \$478362

REMARKS: FTP 75; CP 360; 157 MCFD; 24/64 CH; 15 BLW; STATIC 3.1;
DIFF 5; TEMP 65; 24 HR; PLATE .875; REC 15 BLW; 0 BND

*** 06/07/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, FLW TST

COSTS: CUM WELL \$478362

REMARKS: FTP 70; CP 340; MCFD 157; 24 HR; BND 0; BLW 17; TEMP 60
STATIC 3.1; DIFF 5; PLATE .875; SEP PR 50; 24/64 CH

*** 06/08/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, FLW TST

COSTS: DAILY WELL \$234, CUM WELL \$478596

REMARKS: FTP 70; CP 360; STATIC 3.1; DIFF 4.8; TEMP 70; 152 MCFD;
SEP PR 50; 15 BLW; 0 BND; .875 PLATE; 24/64 CH

CHRON TIME DISTRIBUTION (HRS):

24.00 - 000037, FLW

*** 06/09/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH COST \$1323000,
AMOCO W.I. 1.0000

OPERATIONS: TD 8703 FT, PBTD 8510, FLW TST

COSTS: CUM WELL \$478596

REMARKS: BLWTR 3252; FTP 70; CP 360; STATIC 3.1; DIFF 4.6;
CH 24/64; 24 HR; MCFD 148; SEP PR 50; BLW 16

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*** 06/10/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CGST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8510, SI
COSTS: CUM WELL \$478596
REMARKS: FTP 70; CP 350; 24 HR; CH 24/64; BNC 0; BLW 12; SEP PR 50;
STATIC 3; DIFF 4.5; PLATE .875; TEMP 60; SPRING 500;
RANGE 0-100; 4 INCH METER RUN; MCFD 136

*** 06/11/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CGST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8501, SI
COSTS: CUM WELL \$478596

*** 06/12/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CGST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8501, SI
COSTS: CUM WELL \$478596

*** 06/13/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CGST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8501, SI
COSTS: CUM WELL \$478596

*** 06/16/86 ***

JICARILLA TRIBAL 519 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846167-01-3, API 300392333100, AUTH TD 8520, AUTH CGST \$1323000,
AMOCO W.I. 1.0000
OPERATIONS: TD 8703 FT, PBTD 8501, SI

ROBERT L. BAYLESS

PETROLEUM PLAZA BUILDING
P. O. BOX 168
FARMINGTON, NEW MEXICO 87499
(505) 326-2659

JICARILLA 519 #1
SE/4, Sec. 18, T30N-R2W
Rio Arriba County, New Mexico
RE-COMPLETION REPORT

- 5-29-87 Move in and rig up Bayless Rig 4. Shut down for the night.
- 5-30-87 Shut down - Saturday
- 5-31-87 Shut Down - Sunday
- 6-01-87 Lay down 242 jts. of 2-7/8" EUE tubing on float. Sent float to Amoco yard. Rigged up Basin Perforators - set wireline, set retrievable bridge plug at 4000 ft. RKB. Pressure tested bridge plug to 3000 psi - held ok for 5 minutes. Dropped 10 gallons of sand on top of bridge plug. Shut down for night.
- 6-02-87 Rigged up Basin Perforators. Ran GR-CLL-CBL from 3991 ft. to 3000 ft. under 1,000 psi pressure. Top of cement at 3311 ft. RKB. Pictured Cliffs interval and Fruitland interval had good bond, but poor bond below and above. Pictured Cliffs perforations have no bond below and 47 feet of bond above. Perforated Pictured Cliffs interval with 4" casing gun and 4 JSPF as follows:
- 3723 - 3728' 5' 20 holes (.50" diameter)
- Lost perforating gun and 500 ft. of wireline when coming out of hole with gun run (line parted). Trip in hole with grapple type spear on tubing, recovered fish first try. Lay down wireline and perforating gun. Shut down for night.
- 6-03-87 Trip in hole with 4-1/2" X 2-3/8" swage on end of tubing. Rigged up The Western Company. Circulate hole clean with 2% KCL water, move tubing to 3423'. Broke down Pictured Cliffs perforations at 3300 psi. Established an injection rate into perforations down the tubing of 4.0 BPM @ 2200 psi. ISIP - 350 psi. Re-established an injection rate into perforations down the tubing of 4.0 BPM @ 2200 psi. ISIP = 350 psi. Acidized down the tubing with 250 gallons of 7-1/2% DI weighted HCL acid containing 30 1.1 sg RCN ball sealers. 4.0 BPM @ 2200 psi, had good ball action. Balled off to 3500 psi. Bled off pressure. Final injection rate of 4.0 BPM @ 1300 psi. ISIP = 350 psi. Moved tubing with swage below perforations to knock off ball sealers. Trip tubing out of hole. Fracture stimulated the Pictured Cliffs interval with 16,500 gallons of 70 quality foam containing 20,000 lbs. of 20/40 sand as follows:

4000 gallons of pad	30 BPM @ 1600 psi
5000 gallons of 1 ppg 20-40 sand	30 BPM @ 1900-2100 psi
7500 gallons of 2 ppg 20-40 sand	30 BPM @ 2100-1800 psi
3627 gallons of flush	30 BPM @ 1800 psi

ISIP = 1500 psi, 5 min = 1300 psi, 10 min = 1300 psi, 15 min = 1300 psi. (All water contained 2% KCL and 1/2 gal/1000 clay stabilization agent.) Average rate - 30 BPM; Average pressure - 1900 psi; Maximum pressure - 2200 psi; Minimum pressure - 1600 psi. Average Nitrogen injection rate - 18,000 SCF/min, total Nitrogen pumped 272,395 SCF, total fluid to recover - 162 bbls. Shut in well for 3 hours. Opened well to atmosphere through 1/2" bull plug. Shut down for night.

6-04-87 Well flowing to cleanup after frac.
 9:00 AM - 1/2" opening flowing pressure = 140 psi - no sand, gas won't burn.
 5:00 PM - 1/2" opening flowing pressure = 140 psi - no sand, gas burns.

6-05-87 Well flowing - 7:30 AM - 1/2" opening flowing pressure = 50 psi - gas burns. Approximate flow rate = 337 MCFGPD. Kill well, trip in hole with 2-3/8" tubing. Tag sand fill at 3958 ft. RKB. Landed Tubing as follows:

DESCRIPTION	LENGTH	DEPTH
KB to landing point	10.60	0-11
121 jts., 2-3/8", 4.7#/ft, J-55 and N-80 used tubing	3696.34	11-3707
1 - seating nipple	1.00	3707-3708
1 jt., 2-3/8", 4.7#/ft., N-80 used tubing	31.63	3708-3739
	3739.57	

Nipple down BOP - nipple up wellhead. Released rig.

6-06-87 Well shutin - Building pressure for AOF test.

6-07-87 Well shutin - Building pressure for AOF test.

6-08-87 Well shutin - Building pressure for AOF test.

6-09-87 Well shutin - Building pressure for AOF test.

6-10-87 Well shutin - Building pressure for AOF test.

6-11-87 Well shutin - Building pressure for AOF test.

6-12-87 Well shutin - Building pressure for AOF test.

6-13-87 Well shutin - Building pressure for AOF test.

6-14-87 Well shutin - Building pressure for AOF test.

6-15-87 Conducted AOF test on well - SICP = 1065 psi, SITP = 1062 psi. Flow for 3 hours through 3/4" choke, 2" tester, CP = 110 psi,

FTP = 51 psi. Calculated Q = 754 MCFGPD, Calculated AOF = 762 MCFGPD

- 6-16-87 Testing P.C. interval through test separator -
FTP = 140 psi Static = 2.2 Backpressure = psi
CP = 205 psi Differential = 10.0 Water Prod. = 0 Bbls.
Orifice = 1.250 in. Gas Prod(MCFGPD) = 720
- 6-17-87 Testing P.C. interval through test separator -
FTP = 50 psi Static = 2.0 Backpressure = 50 psi
CP = 90 psi Differential = 2.5 Water Prod. = 0 Bbls.
Orifice = 1.250 in. Gas Prod(MCFGPD) = 163
- 6-18-87 Testing P.C. interval through test separator -
FTP = 64 psi Static = 2.4 Backpressure = 64 psi
CP = 128 psi Differential = 4.8 Water Prod. = 0 Bbls.
Orifice = .750 in. Gas Prod(MCFGPD) = 125
- 6-19-87 Testing P.C. interval through test separator -
FTP = psi Static = 2.4 Backpressure = psi
CP = 128 psi Differential = 3.8 Water Prod. = Bbls.
Orifice = .750 in. Gas Prod(MCFGPD) = 99
- 6-20-87 Testing P.C. interval through test separator -
FTP = psi Static = 2.4 Backpressure = psi
CP = psi Differential = 3.3 Water Prod. = Bbls.
Orifice = .750 in. Gas Prod(MCFGPD) = 86
- 6-21-87 Testing P.C. interval through test separator -
FTP = psi Static = 2.4 Backpressure = psi
CP = psi Differential = 3.1 Water Prod. = Bbls.
Orifice = .750 in. Gas Prod(MCFGPD) = 81
- 6-22-87 Testing P.C. interval through test separator -
FTP = 63 psi Static = 2.5 Backpressure = 63 psi
CP = 159 psi Differential = 2.8 Water Prod. = 3.3 Bbls.
Orifice = .750 in. Gas Prod(MCFGPD) = 76
- 6-23-87 Testing P.C. interval through test separator -
FTP = 57 psi Static = 2.3 Backpressure = 57 psi
CP = 152 psi Differential = 2.8 Water Prod. = 2.5 Bbls.
Orifice = .750 in. Gas Prod(MCFGPD) = 70
- 6-24-87 Shut in well - wait on results of downhole commingle request.

ATTACHMENT #2
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 5/28/87									
Company Robert L. Bayless		Connection None									
Pool Undesignated		Formation Gallup									
Completion Date 6/10/86		Total Depth 8703									
Plug Back TD 8150		Elevation 7437 RKB									
Farm or Lease Name Jicarilla		Well No. 519 #1									
Csg. Size 5-1/2"		Perforations: From 7280 To 7704									
Trg. Size 2-7/8"		Perforations: From To									
Type Well - Single - Brdenhead - G.G. or G.O. Multiple Gas-Single		Packer Set At None									
Producing Thru tubing		Baro. Press. - P _g est. 12.0									
L H Gg est. .63		% CO ₂ % N ₂ % H ₂ S Prover									
FLOW DATA		TUBING DATA									
Casing Data		Duration of Flow									
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI	352 days						2952		2957		
1.	2" x .750						71	60°F	453		3 hrs.
2.											
3.											
4.											
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd				
1	12.3650		83	1.000	.9759	1.011	1013				
2.											
3.											
4.											
5.											
NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.						
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.						
2.					Specific Gravity Separator Gas _____ X X X X X X X X X						
3.					Specific Gravity Flowing Fluid _____ X X X X X						
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.						
5.					Critical Temperature _____ R _____ R						
P _c 2969 P _c ² 8,814,961											
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0251$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0188$						
1		465	216,225	8,598,736							
2											
3											
4											
5											
Absolute Open Flow 1032 Mcfd @ 15.025 Angle of Slope 0 Slope, n .75											
Remarks: Slight mist of fluid during test											
Approved By Division Conducted By: David Ball Calculated By: Kevin McCord Checked By:											

ATTACHMENT #3
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 6/15/87	
Company Robert L. Bayless		Connection None	
Pool Undesignated		Formation Pictured Cliffs	
Completion Date 6/5/87		Total Depth 8703	Plug Back TD 4000
Elevation 7437 RKB		Farm or Lease Name Jicarilla	
Csg. Size 5-1/2"	Wt. 17#	d 4.892	Set At 8703
Perforations: From 3723 To 3728		Well No. 519 #1	
Trg. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 3739
Perforations: From To		Unit 0	Sec. 18
Twp. 30N		Rye. 2W	
Type Well - Single - Brdenhead - G.G. or G.O. Multiple Gas-Single		Packer Set At None	
County Rio Arriba		State New Mexico	
Producing Thru Tubing		Reservoir Temp. °F #	Mean Annual Temp. °F
Baro. Press. - P _a est. 12.0		State New Mexico	
L	H	Gg est. .65	% CO ₂
% N ₂	% H ₂ S	Prover	Meter Run
Taps			
FLOW DATA			
NO.	Prover Line Size	X	Orifice Size
	Press. p.s.i.g.	Diff. h _w	Temp. °F
	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.
	Temp. °F	Press. p.s.i.g.	Temp. °F
SI	10 days		1062
1.	2" x .750		51
2.			60°
3.			110
4.			
5.			
TUBING DATA			
CASING DATA			
Duration of Flow			
RATE OF FLOW CALCULATIONS			
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m
	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}
	Rate of Flow Q, Mcfd		
1	12.3650		63
2.			1.0000
3.			.9608
4.			1.008
5.			754
NO.	P _t	Temp. °R	T _f
	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.	
	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.		
	Specific Gravity Separator Gas _____		XXXXXXX
	Specific Gravity Flowing Fluid _____		XXXXX
	Critical Pressure _____ P.S.I.A.		P.S.I.A.
	Critical Temperature _____ R		R
P _c 1077 P _c ² 1,159,929			
NO.	P _t ²	P _w	P _w ²
	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0130$	
1		122	14,884
2			1,145,045
3			
4			
5			
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 762$			
Absolute Open Flow 762		Mcf @ 15.025	
Angle of Slope θ		Slope, n .85	
Remarks: Slight mist of fluid during test.			
Approved By Division		Conducted By: David Ball	Calculated By: Kevin McCord
Checked By:			

ATTACHMENT #4

ROBERT L. BAYLESS
JICARILLA 519 #1

GALLUP PRODUCTION TEST INFORMATION

<u>DATE</u>	<u>FLOWING TUBING PRESSURE (psi)</u>	<u>ANNULUS PRESSURE (psi)</u>	<u>ORIFICE SIZE (IN.)</u>	<u>STATIC READING</u>	<u>DIFFERENTIAL READING</u>	<u>PRODUCTION (MCFGPD)</u>	<u>SEPERATOR PRESSURE (psi)</u>	<u>WATER PRODUCTION (Bbls)</u>
5/30/86	160	460	.875	3.1	6.0	189	50	70
5/31/86	60	425	.875	3.1	4.3	135		43
6/1/86	78	390	.875	3.0	5.5	167		41
6/2/86	100	400	.875	2.9	5.3	156	60	18
6/3/86	85	400	.875	2.9	4.7	140	50	23
6/4/86	80	420	.875	3.1	5.0	157	50	27
6/5/86	70	350	.875	3.1	4.5	143		15
6/6/86	75	360	.875	3.1	5.0	157		15
6/7/86	70	340	.875	3.1	5.0	157	50	17
6/8/86	70	360	.875	3.1	4.8	152	50	15
6/9/86	70	360	.875	3.1	4.6	148	50	16
6/10/86	70	350	.875	3.0	4.5	136	50	12

Tested 12 Days

Average Gas Production
(Last 8 days)

= 149 MCFGPD (Against 50 psi Backpressure)

Associated Water Production

= 18 BWPD

ATTACHMENT #5

ROBERT L. BAYLESS
JICARILLA 519 #1

PCITURED CLIFFS PRODUCTION TEST INFORMATION

<u>DATE</u>	<u>FLOWING TUBING PRESSURE (psi)</u>	<u>ANNULUS PRESSURE (psi)</u>	<u>ORIFICE SIZE (IN)</u>	<u>STATIC READING</u>	<u>DIFFERENTIAL READING</u>	<u>GAS PRODUCTION (MCFPD)</u>	<u>SEPERATOR PRESSURE (psi)</u>	<u>WATER PRODUCTION (Bbls.)</u>
6/16/87	140	205	1.250	2.2	10.0	720		0
6/17/87	50	90	1.250	2.0	2.5	163	50	0
6/18/87	64	128	.750	2.4	4.8	125	64	0
6/19/87			.750	2.4	3.8	99		
6/20/87			.750	2.4	3.3	86		
6/21/87			.750	2.4	3.1	81		
6/22/87	63	159	.750	2.5	2.8	76	63	3.3
6/23/87	57	152	.750	2.3	2.8	70	57	2.5

Tested 8 Days

Average Gas Production
(Last 3 Days)

= 75 MCFGPD (Against 60 psi Backpressure)

Associated Water Production

= 3 BWPD

ATTACHMENT #6

ROBERT L. BAYLESS
JICARILLA 519 #1

SUMMARY OF
GALLUP AND PICTURED CLIFFS GAS ANALYSIS

NOTE: GAS ANALYSIS WERE COMPARED FROM CLOSEST OFFSET WELL INFORMATION FOUND.

GALLUP FORMATION

<u>WELL</u>	<u>OPERATOR</u>	<u>LOCATION (T-R-S-U)</u>	<u>GAS SPECIFIC GRAVITY</u>	<u>GAS BTU CONTENT</u>
1. San Juan 29-4, Unit #24	Meridian Oil	29-4-8-B	.611	1055
2. Burns Ranch #1	Meridian Oil	29-4-13-A	.683	1181
3. Chicosa Canyon #1	Meridian Oil	31-4-35-M	.591	981
	AVERAGE		.628	1072

PCITURED CLIFFS FORMATION

<u>METER</u>	<u>WELL LOCATIONS</u>	<u>GAS SPECIFIC GRAVITY</u>	<u>GAS BTU CONTENT</u>
1. Bayless Delivery Meter #1	T30NR3W-A11 (8 Wells)	.658	1139
2. Bayless Delivery Meter #2	T29NR3W-N $\frac{1}{2}$ N $\frac{1}{2}$ (2 Wells)	.648	1123
	AVERAGE	.653	1131

ATTACHMENT #7

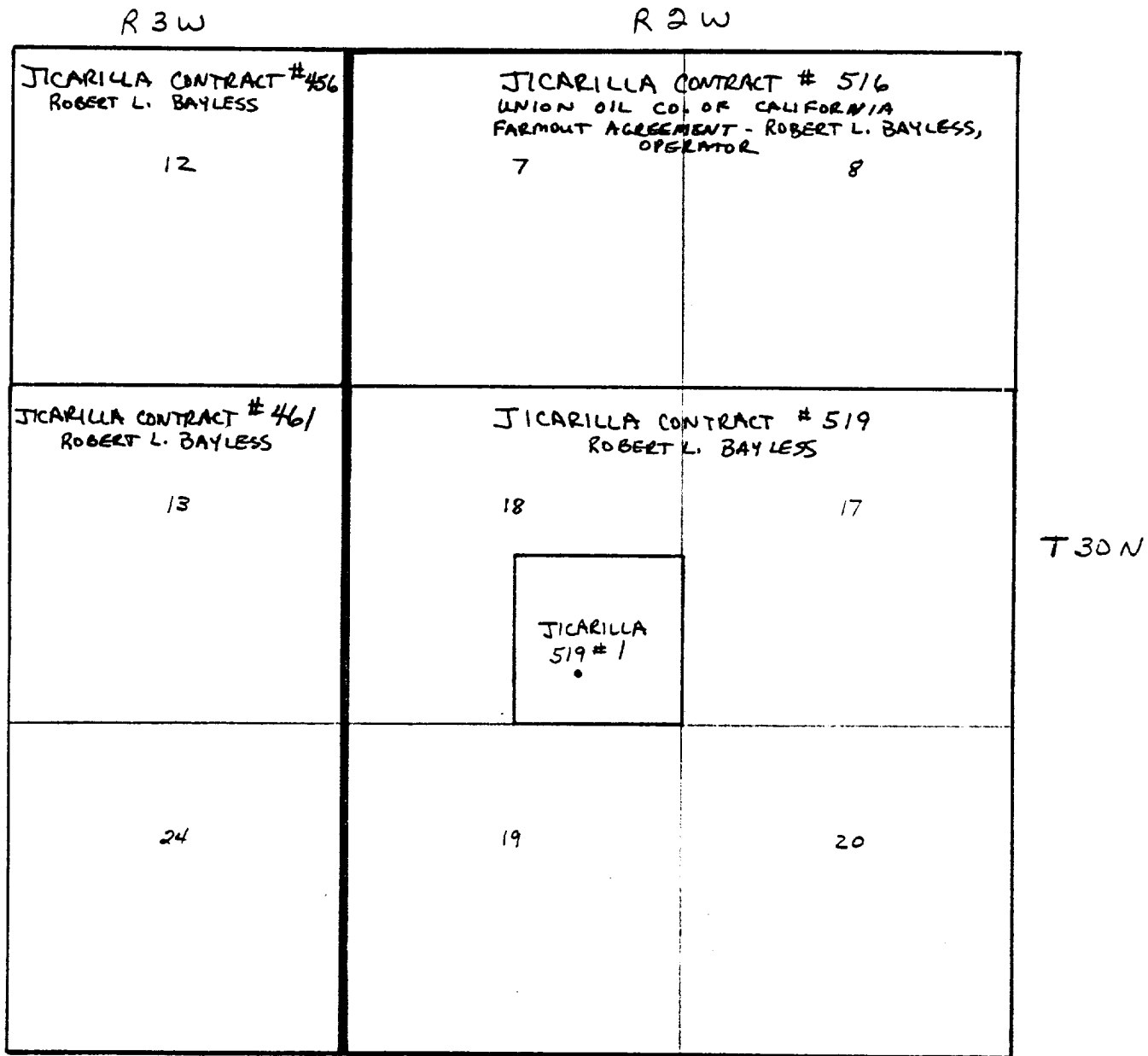
ROBERT L. BAYLESS
JICARILLA 519 #1 - COMMINGLING APPLICATION

PROPOSED ALLOCATION FORMULA: Rates calculated after 3 hour flow through a 3/4" choke during One Point Back Pressure Test.

<u>FORMATION</u>	<u>Q (MCFPD)</u>	<u>% OF TOTAL FLOW</u>
Undesignated Pictured Cliffs	754	43%
Undesignated Gallup	<u>1013</u>	<u>57%</u>
TOTAL	1767	100%

ATTACHMENT #8

LEASES IN VICINITY OF JICARILLA 519 #1



note: BOTH THE GALLUP AND PICTURED CLIFFS FORMATIONS ARE SPACED AT 160 ACRES. THE OWNERSHIP OF THE JICARILLA 519 #1 IS COMMON FOR ALL ZONES (INCLUDES WORKING INTEREST, ROYALTY, AND OVERRIDING ROYALTY).

ROBERT L. BAYLESS

PETROLEUM PLAZA BUILDING
P. O. BOX 168
FARMINGTON, NEW MEXICO 87499
(505) 326-2659

July 2, 1987

Union Oil Company of California
900 Werner Court
P.O. Box 2620
Casper, Wyoming 82602

RE: Proposed Downhole Commingling
Jicarilla 519 #1 Well
Unit O, Sec. 18 T30N R2W
Rio Arriba County, New Mexico

Gentlemen:

The Jicarilla 519 #1 well is an offset well to your JICARILLA CONTRACT #516. We plan to downhole commingle the Gallup and Pictured Cliffs formation in this well and have requested the New Mexico Oil Conservation Division to administratively approve this commingling of production. A copy of this application is attached.

In order to obtain approval from the Oil Conservation Division Director, we must obtain waivers of objections from offset lease holders. If you have no objections to our plans, please execute the waiver portion of this letter and return one copy to us at the above address and another copy to the Division Director, Oil Conservation Division, P.O. Box 2088, Santa Fe, NM 87501.

If you require additional information, please advise.

Yours truly,

Original Signed By
ROBERT L. BAYLESS

Robert L. Bayless

RLB:blk

Enclosure:

I have no objection to the above stated plans.

Union Oil Company of California

Date