



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 10-5-87

RE: Proposed MC _____
Proposed DHC K _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 9-15-87
for the Robert L. Bayless Ticaniilla 492#1 P-28-28N-2W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approved

Yours truly,

E. J. Busch

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

RECEIVED
SEP 15 1987
OIL CON. DIV.
DIST. 3

September 11, 1987

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

RE: Request for Administrative
Approval to Cowhole Commingle
Robert L. Bayless
Jicarilla 492 #1
Unit P, Sec. 29, T28N-R3W
Undesignated Pictured Cliffs,
Undesignated Mesa Verde, and
Undesignated Gallup Fields
Jicarilla Contract #492
Rio Arriba County, New Mexico

Dear Mr. Lemay:

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

The Jicarilla 492 #1 well was spudded by Amoco Production Company in September of 1985. A complete daily activity report for this well is presented as Attachment #1. Production casing, (7") was set and cemented at 8370 feet with PBTD at 8341 feet. The Gallup interval (6910-7440) was perforated and fracture stimulated with 270,000 gallons of 30# cross-linked gelled fluid containing 440,000 lbs. of 20-40 sand. Amoco tested this zone and determined it was uneconomical. A cast-iron bridge plug was set at 6050 feet. The Mesa Verde interval (Point Lookout) was perforated from 5930 to 6010 feet and fracture stimulated with 100,000 gallons of 75 quality foam containing 125,000 lbs of 20-40 sand. Amoco tested this zone and determined it was uneconomical. The well was then turned over to Bayless.

Bayless drilled the cast iron bridge plug at 6050 feet (between the Mesa Verde and Gallup formations) and set a retrievable bridge plug at 4000 feet. The Pictured Cliffs formation was perforated from 3508 to 3570 feet and fracture stimulated with 45,000 gallons of 70 quality foam containing 60,000 lbs. of 20-40 sand. The well was cleaned up and the bridge plug at 4000 feet was retrieved.

A 3 hour flow test was conducted on the well (all zones open) on September 9, 1987, which resulted in an AOF of 10,408 MCFGPD (Attachment #2). It should be noted here that the tubing was logged off with water when this test was performed. Therefore, the test was taken

William J. Lemay, Chairman

Page 3

September, 1987

on the annulus of this well. When the ADF is taken in this manner, the gas volumes will be unusually high, making the production test meaningless. In addition to this ADF test performed on the well by Bayless, a 17 day flow test was performed on the Gallup formation by Amoco in November and December of 1985, and an 8 day swab test was performed on the Mesa Verde interval in December of 1985 and January of 1986. The Gallup zone averaged 194 MCFGPD with 8 BWPD, while the Mesa Verde zone averaged 161 MCFGPD with 30 BWPD. Both tests were run against 30-370 psi backpressure. These tests are presented as Attachments #3 and #4. The Pictured Cliffs zone in this well is very similar to the Pictured Cliffs zone in Bayless' offset well, the Jicarilla 491 #1 (Unit J, Sec 32, T28N R2W). Amoco tested the Upper Pictured Cliffs zone in this well for a 6 day period which resulted in an average gas rate of 114 MCFGPD with associated water production of 29 BWPD. A copy of this flow test for the Jicarilla 491 #1 well is presented as Attachment #5.

The flow test results from each zone and the fact that the tubing was logged off for the ADF test indicate that each zone has marginal gas production capabilities with significant associated water production. These tested flow rates are performed against 30-60 psi backpressure, while line pressures in the area can get as high as 300-400 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, as was seen in the ADF test. Logging off the well could 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 associated water production in these zones without artificial lift.

The gas produced from the Gallup, Mesa Verde, and Pictured Cliffs zones should be fairly similar in this area. The average gas gravity for these zones should be approximately 0.65 with an approximate BTU value of 1100 BTU/CFT. From the ADF test taken on this well (Attachment #2), the 1405 psi surface shutin pressure taken on the annulus of this well is representative of the shutin pressure seen on the Mesa Verde and Gallup formations in this area. The Pictured Cliffs formation should shut-in for approximately 1000 psi. This pressure data can be found in wells to the south and west of the Jicarilla 491 #1 well. It is apparent from this well and offset wells that the shutin

September, 1987

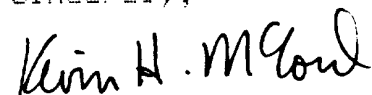
pressures for any zone producing in this well is not less than 50% of any other zone in the well. This suggests that no significant crossflow will take place between any zones in this well.

The production from the Gallup, Mesa Verde, and Pictured Cliffs zones can be allocated using the ratios of the rate of flow rate production tests performed by Amoco. Using these production tests, 42 % of the commingled gas production should be allocated to the Gallup formation, 34 % to the Mesa Verde zone, and 24 % of the gas should be allocated to the Pictured Cliffs formation. This well should not produce any oil, but if it does, 100% of the oil production should be allocated to the Gallup formation. This allocation formula is shown in Attachment #6. 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 #7 is an acreage plat showing the ownership of leases in the vicinity of the Jicarilla 492 #1 well. The ownership (working interest, royalty, and overriding royalty) of the Gallup, Mesa Verde, and the Pictured Cliffs zones is common in this well. The operation of each of the spacing units around this well is controlled by Robert L. Bayless through farmout agreements. By copy of this application, we are advising the BLM of our plans to downhole commingle the Gallup, Mesa Verde, and Pictured Cliffs zones in this well.

It is obvious from the production tests taken on the Gallup, Mesa Verde, and Pictured Cliffs 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

KM/v1

Attachments

Copies: NMOCD, Aztec
BLM, Farmington
Amoco Production Co.

AMOCO PRODUCTION COMPANY

CHRONOLOGICAL REPORT

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

1

*** JOB INITIATION REPORT: COMPANY OPERATED - DRILLING - EXPLORATORY

API 300392379300 FLAC 846657

WILDCAT, JICARILLA CONTRACT 492 NO., 1, RIO ARRIBA, NEW MEXICO
OPERATOR: AMOCO PRODUCTION

AMOCO W.I.: 1.0000

AUTH DATE 08/30/85, AUTH TO 8304, AUTH COST \$671000
CONTINUOUS ROTARY DRILLING OPERATIONS DATE 09/26/85

SUSPENDED 01/03/86

STATE OF PRODUCTION READINESS DATE 01/02/86

**** CONTRACTOR(S) INFORMATION:

FOUR CORNERS, 0004, RIG MOVE ON 09/26/85, RIG RELEASED 10/17/85
BIG A, 0005, RIG MOVE ON 10/23/85, RIG RELEASED 11/26/85
FARMINGTON, 0027, RIG MOVE ON 12/09/85, RIG RELEASED 01/02/86

Stanley

492

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

2

*** 09/27/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 1

OPERATIONS: TD 552 FT, SURVEY, FM SN X SH, 552

MUD: DEPTH 552 FT, LSND POLYMER, 8.9 PPG, VISC. 40

BIT AND HYDRAULICS: BIT #00001, 17.750 IN, OSC3, JETS 12/12/-/-,

DEPTH OUT 552 FT, 552 FT, 9.25 HRS, 100 RPM, SERIAL #RETIP, PP 1700 PSI,

7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 127 FT, INCL 0.25 DEG, DIR NOOE

DEPTH 375 FT, INCL 0.50 DEG, DIR NOOE

DEPTH 531 FT, INCL 0.75 DEG, DIR NOOE

TIME: DRL 9.50, SURVEY 0.75, CIRC 0.25, SERVICE RIG 0.25, RIG UP 3.00,

RIG DOWN 3.50, OTHER: 0.75 HRS

COSTS: DAILY WELL \$7201, CUM WELL \$7201

REMARKS: SPUD 1845 HR 092685

MUD ADDITIVES: TYPE-VISCOUSIFIERS, 5200.00 GEL,

TYPE-VISCOUSIFIERS, 200.00 LIME,

CHRON TIME DISTRIBUTION (HRS):

6.75 - 000036, RD X MIRU

0.75 - 000035, DRL RYM HOLE

2.50 - 000002, DRL SURF

0.25 - 000006, SURVEY

1.75 - 000002, DRL

0.25 - 000021, RIG SERVICE

2.00 - 000002, DRL

0.25 - 000006, SURVEY

3.00 - 000002, DRL

0.25 - 000019, CIRC

0.25 - 000006, SURVEY

*** 09/28/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH CCST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 2

OPERATIONS: TD 1376 FT, DRL, FM SN X SH, 824

MUD: DEPTH 1002 FT, LSND POLYMER, 8.2 PPG, VISC. 30, FL 10.0

BIT AND HYDRAULICS: BIT #00001, 12.250 IN, OSC3, JETS 12/12/-/-,

DEPTH OUT 552 FT, 9 FT, 53.50 HRS, WOB 110, SERIAL #RETIP, PP 1800 PSI,

7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

BIT #00002, 8.750 IN, J11, JETS 11/12/-/-, 824 FT, 7.50 HRS, WOB 30,

80 RPM, SERIAL #F117, PP 1800 PSI, 72 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 808 FT, INCL 1.75 DEG, DIR NOOE

DEPTH 964 FT, INCL 1.50 DEG, DIR NOOE

DEPTH 1212 FT, INCL 1.25 DEG, DIR NOOE

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

3

TIME: DPL 7.50, TRIP 0.50, SURVEY 0.75, CSG & CMT 2.25, WCC 12.25,
SERVICE RIG 0.25, OTHER: 0.50 HRS

COSTS: DAILY WELL \$10909, CUM WELL \$18110

REMARKS: 70000 SW/BHA

MUD ADDITIVES: TYPE-VISCOUSIFIERS, 7100.00 GEL LB,
TYPE-VISCOUSIFIERS, 200.00 LIME LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTRCL), 200.00 DRISPAC LB,
TYPE-VISCOUSIFIERS, 4.00 LOSOL QT,

CHRON TIME DISTRIBUTION (HRS):

0.50 - 000004, TO
1.25 - 000011, RUN 13 JT 9-5/8 CSG
1.00 - 000011, CMT SURF
12.25 - 000013, WCC
0.50 - 000037, DRL 40 FT CMT
2.50 - 000002, DRL
0.25 - 000021, RIG SERVICE
0.25 - 000006, SURVEY
1.25 - 000002, DRL
0.25 - 000006, SURVEY
2.00 - 000002, DRL
0.25 - 000006, SURVEY
1.00 - 000002, DRL

*** 09/29/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 3

OPERATIONS: TD 2892 FT, DRL, FM SN X SH, 1516

MUD: DEPTH 2892 FT, LSND POLYMER, 8.7 PPG, VISC. 33, FL 8.6, PH 8.5, PV 2,
YP 3, GELS 1/1, SOLIDS 4.2%, CL 300, CA 120, FILTER CAKE 1, PF 1.2,
MF 0.2, PM 0.1

BIT AND HYDRAULICS: BIT #00002, 8.750 IN, J11, JETS 11/12/-/-,

DEPTH OUT 1802 FT, 1250 FT, 11.75 HRS, WOB 40, 80 RPM, CONDITION 8/4/I/-,

SERIAL #F117, PP 1800 PSI, 7 GPM, PMP #1: SIZE - X - X 102 SPM

BIT #00003, 8.750 IN, F2, JETS 11/12/-/-, DEPTH OUT 2892 FT, 1090 FT,

16.50 HRS, WOB 40, 75 RPM, CONDITION 7/5/I/-, SERIAL #F708, PP 1800 PSI,
7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

BIT #00004, 8.750 IN, V517, JETS 12/12/-/-, SERIAL #000020149

DEVIATION: DEPTH 1460 FT, INCL 1.25 DEG, DIR NOOE

DEPTH 1775 FT, INCL 1.25 DEG, DIR NOOE

DEPTH 2344 FT, INCL 0.75 DEG, DIR NOOE

DEPTH 2873 FT, INCL 0.75 DEG, DIR NOOE

TIME: DRL 20.75, TRIP 0.25, SURVEY 1.00, SERVICE RIG 0.75, REAMING 0.25

COSTS: DAILY WELL \$19100, CUM WELL \$37210

REMARKS: 85000 SW/BHA

CHRON TIME DISTRIBUTION (HRS):

1.25 - 000002, DRL
0.25 - 000006, SURVEY
0.50 - 000002, DRL

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

4

0.25 - 000021, RIG SERVICE
 2.50 - 000002, DRL
 0.50 - 000006, SURVEY
 1.25 - 000004, TRIP
 0.25 - 000024, WASH 53 FT
 0.25 - 000021, RIG SERVICE
 4.50 - 000002, DRL
 0.25 - 000006, SURVEY
 3.00 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 5.75 - 000002, DRL

*** 09/30/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 4

OPERATIONS: TD 3444 FT, TO FOR CORE, 552

MUD: DEPTH 3404 FT, LSND POLYMER, 8.9 PPG, VISC. 65, FL 8.0, PH 8.0, PV 8,

YP 6, GELS 1/5, SOLIDS 4.2%, CL 300, CA 360, FILTER CAKE 1, PF 0.1

BIT AND HYDRAULICS: BIT #00004, 8.750 IN, VS17, JETS 11/12/-/-,

DEPTH OUT 3444 FT, 552 FT, 14.00 HRS, WOB 40, 75 RPM, SERIAL #0000020149,

PP 1800 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 2939 FT, INCL 0.75 DEG, DIR NOOE

DEPTH 3404 FT, DIR NOOE

TIME: DRL 16.75, TRIP 4.50, SURVEY 0.50, CIRC 1.00, SERVICE RIG 0.50,

REAMING 0.75

COSTS: DAILY WELL \$9986, CUM WELL \$47196

MUD ADDITIVES: TYPE-VISCOSIFIERS, 6400.00 GEL LB,

TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 300.00 DRISPAC LB,

TYPE-SHALE CONTROL, 6.00 NEW DRL GAL,

TYPE-INHIBITORS FOR CORROSION, 6.00 LOSOL QT,

TYPE-CALCIUM TREATMENT, 300.00 SODA ASH LB,

CHRON TIME DISTRIBUTION (HRS):

0.25 - 000006, SURVEY
 2.25 - 000004, TRIP
 0.50 - 000024, WASH AT 2407 TO 2543 FT
 0.25 - 000004, TI
 0.25 - 000024, WASH 60 FT
 4.00 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 9.75 - 000002, DRL
 0.25 - 000021, RIG SERVICE
 3.00 - 000002, DRL
 1.00 - 000019, CIRC FOR CORE #1
 0.25 - 000006, SURVEY
 1.50 - 000004, TO FOR CORE BBL

*** 10/01/85 ***

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

5

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 5

OPERATIONS: TD 3496 FT, CORE, FM PC, 52

MUD: DEPTH 3475 FT, LSND POLYMER, 8.8 PPG, VISC. 63, FL 7.2, PH 8.5, PV 18,

YP 13, GELS 5/16, SOLIDS 3.2%, CL 1000, CA 240, OIL 15%, HT-HP FL 1 AT

PF 0.1, MF 0.4, PM 0.3

BIT AND HYDRAULICS: BIT #00005, 8.750 IN, C3, DEPTH OUT 3475 FT, 30 FT,

7.25 HRS, WOB 18, 60 RPM, SERIAL #IW5468, PP 600 PSI, 7 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

BIT #00006, 8.750 IN, C201, DEPTH OUT 3496 FT, 21 FT, 5.75 HRS, WOB 18,

60 RPM, SERIAL #0000112056, PP 600 PSI, 7 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

TIME: TRIP 6.25, RIG REPAIR 2.25, CORING 13.00, REAMING 0.50, RU TOOLS 1.00,

RD TOOLS 0.75

COSTS: DAILY WELL \$7279, CUM WELL \$54475

MUD ADDITIVES: TYPE-VISCOSIFIERS, 6300.00 GEL LB,

TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 120.00 DRISPAC LB,

TYPE-VISCOSIFIERS, 4.00 NEWDRL GAL,

TYPE-VISCOSIFIERS, 5.00 LOSOL QT,

TYPE-CALCIUM TREATMENT, 400.00 S ASH LB,

CHRON TIME DISTRIBUTION (HRS):

0.50 - 000004, TRIP

1.00 - 000033, PU CORE #1

2.00 - 000004, TI

0.25 - 000024, WASH 26 FT

2.50 - 000015, CORE

0.50 - 000005, WELD 4 INCH VALVE ON PIT

0.50 - 000015, CORE

2.00 - 000004, TO CORE #1

0.75 - 000037, LD CORE 24 FT REC

1.75 - 000005, WELD

1.50 - 000004, TI CORE #2

0.25 - 000024, WASH 18 FT

2.75 - 000015, CORE

0.25 - 000021, R SERVICE

2.75 - 000015, CORE

0.25 - 000006, TO CORE #2

*** 10/02/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 8

OPERATIONS: TD 3675 FT, DRL, 179

MUD: DEPTH 3650 FT, LSND POLYMER, 8.8 PPG, VISC. 40, FL 8.2, PH 9.0, PV 17,

YP 20, GELS 7/29, SOLIDS 3.0%, CL 800, CA 200, FILTER CAKE 1, PF 0.3,

MF 0.8, PM 0.5

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

6

BIT AND HYDRAULICS: BIT #000007, 8.750 IN, V512, JETS 12/12/-/-, 172 FT,
6.00 HRS, WOB 90, 75 RPM, SERIAL #0000020149, PP 1800 PSI, 7 GPM,
PMP #1: SIZE 6.00 X 8.00 X 100 SPM

COSTS: DAILY WELL \$8297, CUM WELL \$62772

REMARKS: 90 SW/BHA

MUD ADDITIVES: TYPE-VISCOSIFIERS, 2400.00 GEL LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 40.00 DRISPAC LB,
TYPE-SHALE CONTROL, 0.50 MUDRL LB,
TYPE-OTHER, 2.00 LOSOL QT,
TYPE-CALCIUM TREATMENT, 200.00 S ASH LB,

CHRON TIME DISTRIBUTION (HRS):

1.75	-	000004, TO
0.75	-	000034, LD CORE #2
0.50	-	000033, MAKE UP CORE #3
1.50	-	000005, WELD FLANGE FL
1.25	-	000004, TI CORE #3
3.00	-	000015, CORING
3.00	-	000004, TO
0.50	-	000034, LD CORE #3
1.00	-	000004, TI
0.50	-	000024, REAM TO
4.00	-	000002, DRL
0.75	-	000008, LGST CIRC 3638 FT
0.25	-	000004, TI 5 STDS
1.00	-	000002, DRL
3.00	-	000004, TO
1.00	-	000002, DRL

*** 10/03/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 7

OPERATIONS: TD 4300 FT, DRL, 615

MUD: DEPTH 4275 FT, LSND POLYMER, 8.7 PPG, VISC. 40, FL 9.2, PH 8.5, PV 9,

YP 12, SOLIDS 1.4%, CL 600, CA 140, MBT 12.5, PF 0.2, MF 0.5, PM 0.4

BIT AND HYDRAULICS: BIT #000007, 8.750 IN, V517, JETS 12/12/-/-, 1423 FT,

42.50 HRS, WOB 40, 75 RPM, SERIAL #0000020419, PP 1700 PSI, 72 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

COSTS: DAILY WELL \$81774, CUM WELL \$144546

REMARKS: CORE #1 31 FT CORED: 29 FT REC: 93.5% REC

CORE #2 30 FT CORED: 21 FT REC: 70% REC

CORE #3 21 FT CORED: 7 FT REC: 33% REC

MUD ADDITIVES: TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 6600.00 GEL LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 160.00 DRIS PACK,
TYPE-MATERIAL FOR LOST CIRCULATION, 1200.00 FIBER LB,
TYPE-SHALE CONTROL, 3.50 NEW DRL GAL,
TYPE-MATERIAL FOR LOST CIRCULATION, 1700.00 MULTISEAL LB,
TYPE-INHIBITORS FOR CORROSION, 6.00 LOSOL QT,
TYPE-CALCIUM TREATMENT, 200.00 SODA ASH LB,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

7

TYPE-MATERIAL FOR LOST CIRCULATION, 1200.00 SAW DUST,
CHRON TIME DISTRIBUTION (HRS):

2.00	-	000002,	DRL
0.25	-	000021,	SERVICE RIG
0.75	-	000002,	DRL
0.25	-	000021,	SERVICE RIG
0.50	-	000002,	DRL
1.00	-	000005,	RIG REPAIR
2.00	-	000002,	DRL
0.25	-	000006,	SURVEY
3.50	-	000002,	DRL
0.25	-	000021,	SERVICE RIG
5.25	-	000002,	DRL

*** 10/04/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 8

OPERATIONS: TD 4947 FT, DRL, 647

MUD: DEPTH 4900 FT, LSND POLYMER, 8.8 PPG, VISC. 40, FL 8.4, PH 8.8, PV 12,

YP 9, SOLIDS 2.7%, CL 500, CA 360, MBT 15.0, FILTER CAKE I, PF 2.0,

MF 0.8, PM 0.5

BIT AND HYDRAULICS: BIT #000007, 8.750 IN, V517, JETS 12/12/-/-, 2055 FT,

65.50 HRS, WOB 40, 75 RPM, SERIAL #0000020149, PP 1650 PSI, 7 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 4470 FT, INCL 0.50 DEG, DIR NOOE

TIME: DRL 23.00, SURVEY 0.25, SERVICE RIG 0.75

COSTS: DAILY WELL \$10570, CUM WELL \$155116

MUD ADDITIVES: TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), GEL 10400#

TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 160.00

DRIST PACK LB,

TYPE-SHALE CONTROL, 4.00 NEW DRL GAL,

TYPE-INHIBITORS FOR CORROSION, 7.00 LOSOL QT,

TYPE-CALCIUM TREATMENT, 500.00 SODA ASH LB,

CHRON TIME DISTRIBUTION (HRS):

2.00	-	000002,	DRL
0.25	-	000021,	SERVICE RIG
3.50	-	000002,	DRL
0.25	-	000006,	SURVEY
4.00	-	000002,	DRL
0.25	-	000021,	SERVICE RIG
7.75	-	000002,	DRL
0.25	-	000002,	DRL
0.25	-	000021,	SERVICE RIG
5.50	-	000002,	DRL

*** 10/05/85 ***

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

8

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 9

OPERATIONS: TD 6425 FT, DRL, 1478

MUD: DEPTH 5415 FT, LSND POLYMER, 8.8 PPG, VISC. 47, FL 7.2, PH 8.5, PV 16,

YP 18, GELS 7/-, SOLIDS 3.4%, CL 400, CA 140, MBT 17.5, PF 0.2, MF 0.6,

PM 0.4

BIT AND HYDRAULICS: BIT #00007, 8.750 IN, V517, JETS 12/12/-/-, 2533 FT,

90.75 HRS, WOB 40, 75 RPM, SERIAL #0000020149, PP 1650 PSI, 7 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 5436 FT, INCL 0.75 DEG, DIR NOOE

DEPTH 5303 FT, INCL 0.75 DEG, DIR NOOE

TIME: DRL 22.75, SURVEY 0.50, SERVICE RIG 0.75

COSTS: DAILY WELL \$9397, CUM WELL \$164513

BOTTOM HOLE ASSEMBLY: DEPTH IN 6425 FT,

DP OR TBG: OD 4.500

BHA DETAIL: OTHER, 1.000 FT, OD 8.750 IN, ID 2.813 IN, MANUFACTURER BIT

OTHER, 2.000 FT, OD 6.313 IN, ID 2.813 IN, MANUFACTURER BIT SUBS

COLLAR, 618.580 FT, OD 6.313 IN, ID 2.813 IN, MANUFACTURER DCS

DRILL PIPE & HW, 93.490 FT, ALUMINUM, MANUFACTURER DP HW

MUD ADDITIVES: TYPE-SHALE CONTROL, 3.50 NEW DRL GAL,

TYPE-INHIBITORS FOR CORROSION, 2.50 FILIMINE GAL,

TYPE-ALKALINITY, PH CONTROL, 300.00 SODA ASH LB,

TYPE-OTHER, 80.00 FLC LB,

TYPE-VISCOSIFIERS, 5900.00 GEL LB,

TYPE-MATERIAL FOR LOST CIRCULATION, 160.00 FIBER LB,

TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 80.00

DRIST PACK LB,

TYPE-INHIBITORS FOR CORROSION, 7.00 LOSOL QT,

CHRON TIME DISTRIBUTION (HRS):

2.25 - 000002, DRL

0.25 - 000021, RIG SERVICE

7.25 - 000002, DRL

0.50 - 000006, SURVEY

7.75 - 000002, DRL

0.25 - 000021, RIG SERVICE

5.75 - 000002, DRL

*** 10/06/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 10

OPERATIONS: TD 5608 FT, TI X CORE BBL, 817

MUD: DEPTH 5447 FT, LSND POLYMER, 8.8 PPG, VISC. 44, FL 8.4, PH 8.5, PV 13,

YP 12, SOLIDS 3.4%, CL 500, CA 160, MBT 17.5

BIT AND HYDRAULICS: BIT #00007, 8.750 IN, V517, JETS 12/12/-/-,

DEPTH OUT 5447 FT, 2555 FT, 91.00 HRS, WOB 40, 75 RPM, CONDITION 7/8/I/-,

SERIAL #0000020149, PP 1650 PSI, 7 GPM,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

9

PMP #1: SIZE 3.00 X 6.00 X 102 SPM

BIT #00003, 8.750 IN, F2, JETS 11/12/-/-, DEPTH OUT 5608 FT, 461 FT,
11.00 HRS, WOB 40, 75 RPM, CONDITION 4/4/I/-, SERIAL #F915, PP 1900 PSI,
7 GPM, PMP #1: SIZE 8.00 X 6.00 X 102 SPM

BIT #00009, 8.750 IN, CHRTEN, SERIAL #0000112056

COSTS: DAILY WELL \$7333, CUM WELL \$172346

MUD ADDITIVES: TYPE-VISCOSIFIERS, 6500.00 GEL LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 40.00
DRIST PACK LB,
TYPE-INHIBITORS FOR CORROSION, 3.00 LOSOL CT,
TYPE-ALKALINITY, PH CONTROL, 400.00 SODA ASH LB,
TYPE-OTHER, 25.00 FLC LB,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
0.25 - 000002, DRL
0.25 - 000006, SURVEY
4.50 - 000004, TRIP
3.00 - 000002, DRL
0.25 - 000021, RIG SERVICE
8.00 - 000002, DRL
0.75 - 000019, CIRC
2.75 - 000004, TO AT CORE POINT
1.00 - 000015, PU CORE BBL
1.25 - 000004, TI X CORE BBL

*** 10/07/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 11

OPERATIONS: TD 5780 FT, DRL, 172

MUD: DEPTH 5763 FT, LSND POLYMER, 8.8 PPG, VISC. 42, FL 8.6, PH 8.0, PV 10,
YP 10, GELS -/4, SOLIDS 3.4%, CL 400, CA 120, MBT 17.5, PF 0.1, MF 0.5,
PM 0.3

BIT AND HYDRAULICS: BIT #00009, 8.750 IN, S84F, JETS 11/12/-/-, 142 FT,
4.50 HRS, WOB 40, 75 RPM, SERIAL #F228, PP 1900 PSI, 7 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

TIME: DRL 4.50, TRIP 9.00, CORING 7.75, CIRC 0.25, SERVICE RIG 0.25,

CUT DRL LINE 1.00, REAMING 1.25

COSTS: DAILY WELL \$5779, CUM WELL \$178125

BOTTOM HOLE ASSEMBLY: DEPTH IN 5780 FT,

DP OR TBG: OD 4.500

BHA DETAIL: OTHER, 1.000 FT, OD 8.750 IN, ID 2.813 IN, MANUFACTURER BIT
OTHER, 2.000 FT, OD 6.313 IN, ID 2.813 IN, MANUFACTURER JUNK BASKET
OTHER, 3.000 FT, OD 6.313 IN, ID 2.813 IN, MANUFACTURER BIT SUB
OTHER, 618.580 FT, OD 6.313 IN, ID 2.813 IN, MANUFACTURER QC
OTHER, 93.490 FT, ALUMINUM, MANUFACTURER WEIGHT PIPE HW

MUD ADDITIVES: TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 40.00
DRIST PACK LB,
TYPE-SHALE CONTROL, 3.00 NEW DRL 6,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

10

TYPE-ALKALINITY, PH CONTROL, 100.00 SODA ASH LB,
CHRON TIME DISTRIBUTION (HRS):

1.75 - 000004, TRIP
0.25 - 000024, REAM TO BTM
0.50 - 000024, REAMING
0.25 - 000021, RIG SERVICE
0.25 - 000019, CIRC HOLE
6.25 - 000015, CORING #4
0.75 - 000004, TO X CORE
3.00 - 000004, TRIP
1.50 - 000015, LD 12 FT CORE X B
1.00 - 000022, CUT 60 FT DRL LINE REPORT SW
2.50 - 000004, TRIP
1.00 - 000004, TRIP
0.50 - 000024, REAM TO BTM
4.50 - 000002, DRL

*** 10/08/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 12

OPERATIONS: TD 5874 FT, TO X CORE 8BL, FM PT LOOKOUT, 94

MUD: DEPTH 5365 FT, LSND POLYMER, 8.8 PPG, VISC. 46, FL 7.6, PH 8.0, PV 11,
YP 12, GELS 3/10, SOLIDS 3.8%, CL 400, CA 140, M3T 17.5, PF 0.1, MF 0.5,
PM 0.3BIT AND HYDRAULICS: BIT #00010, 8.750 IN, S84F, JETS 11/12/-/-,
DEPTH OUT 5843 FT, 213 FT, 10.25 HRS, WOB 40, 75 RPM, SERIAL #F228,
PP 1900 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPMBIT #00011, 8.750 IN, C201, DEPTH OUT 5874 FT, 30 FT, 8.75 HRS, WOB 15,
50 RPM, SERIAL #000C112056, PP 900 PSI, 72 GPM,
PMP #1: SIZE 6.00 X 8.00 X 101 SPMTIME: DRL 5.75, TRIP 6.50, SURVEY 0.50, CORING 8.75, CIRC 1.00,
SERVICE RIG 0.50, OTHER: 1.00 HRS

COSTS: DAILY WELL \$8831, CUM WELL \$186956

REMARKS: CORE 5843-5874

MUD ADDITIVES: TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 40.00 DRIS PAC LB,

TYPE-SHALE CONTROL, 1.50 NEW DRL GAL,

TYPE-VISCOSIFIERS, 3600.00 GEL LB,

TYPE-OTHER, 40.00 FLC LB,

TYPE-OTHER, 3.00 LOSOL GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
0.25 - 000021, RIG SERVICE
3.75 - 000002, DRL
1.00 - 000019, CIRC
0.50 - 000006, SURVEY
2.50 - 000004, TO
0.50 - 000004, TO
2.25 - 000015, PU CORE 8BL

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

11

1.00 - 000004, RUN DC IN HOLE
2.00 - 000004, TI
1.00 - 000037, FILL PIPE PMP BALL
1.25 - 000015, CORE
0.50 - 000015, CORE
0.25 - 000021, RIG SERVICE
4.75 - 000015, CORE
0.50 - 000004, TO X CORE BBL

*** 10/09/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCC PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCC W.I. 1.0000, DAYS FROM SPUD 13

OPERATIONS: TD 6030 FT, DRL, FM SN X SH, 156

MUD: DEPTH 6000 FT, LSND POLYMER, 3.8 PPG, VISC. 42, FL 8.2, PH 9.0, PV 10,
YP 11, GELS 3/11, SOLIDS 2.8%, CL 100, CA 120, MBT 17.5, FILTER CAKE 1,

PF 0.2, NF 0.6, PM 0.4

BIT AND HYDRAULICS: BIT #00012, 8.750 IN, 2B3T, JETS 11/11/11/-,
DEPTH OUT 5928 FT, 54 FT, 2.50 HRS, WOB 18, 75 RPM, SERIAL #101P15,

PP 1250 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

BIT #00013, 8.750 IN, J22, JETS 12/12/8 /-, 102 FT, 5.75 HRS, WOB 45,
75 RPM, SERIAL #0000517207

TIME: DRL 8.25, TRIP 9.75, SERVICE RIG 0.50, REAMING 0.50, OTHER: 5.00 HRS

COSTS: CUM WELL \$186956

MUD ADDITIVES: TYPE-VISCOIFIERS, 2000.00 GEL LB,
TYPE-INHIBITORS FOR CORROSION, 2.00 LOSOL QT,

CHRON TIME DISTRIBUTION (HRS):

0.50 - 000015, CORE
1.50 - 000004, TRIP FOR CORE #5
0.50 - 000004, TO
2.50 - 000015, LD CORE #5
0.50 - 000015, LD TOOLS
1.75 - 000004, TI
0.50 - 000024, REAM TO BTM 40 FT
1.75 - 000002, DRL
0.25 - 000021, SERVICE RIG
0.75 - 000002, DRL
3.00 - 000004, TO
3.00 - 000004, TI
1.00 - 000037, WASH TO BTM
0.75 - 000021, SERVICE RIG
5.75 - 000002, DRL

*** 10/10/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCC PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

12

AMOCO W.I. 1.0000, DAYS FROM SPUD 14

OPERATIONS: TD 6527 FT, DRL, FM PT LOOKOUT, 497

MUD: DEPTH 6495 FT, LSND POLYMER, 8.7 PPG, VISC. 42, FL 8.9, PH 9.5, PV 13,
YP 13, GELS 4/15, SOLIDS 2.4%, CL 400, CA 100, MBT 17.5, PF 0.4, MF 0.8,
PM 0.7

BIT AND HYDRAULICS: BIT #00013, 8.750 IN, J22, JETS 12/12/-/-,

DEPTH OUT 6153 FT, 225 FT, 11.25 HRS, WOB 45, 75 RPM, CONDITION 4/5/I/-,

SERIAL #F517, PP 1300 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 120 SPM

TIME: DRL 17.25, TRIP 4.50, SURVEY 0.25, SERVICE RIG 0.75, CUT DRL LINE 0.75,
OTHER: 0.50 HRS

COSTS: DAILY WELL \$6218, CUM WELL \$193174

MUD ADDITIVES: TYPE-VISCOSIFIERS, 5200.00 GEL LB,
TYPE-INHIBITORS FOR CORROSION, 5.00 LOSOL QT,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 40.00 FLC LB,
TYPE-ALKALINITY, PH CONTROL, 80.00 CAUSTIC LB,
TYPE-ALKALINITY, PH CONTROL, 300.00 SODA ASH LB,
TYPE-ALKALINITY, PH CONTROL, 3.00 NEW DRL GAL,
TYPE-INHIBITORS FOR CORROSION, 4.00 FILAMINE GAL,

CHRON TIME DISTRIBUTION (HRS):

2.00	-	000002, DRL
0.25	-	000021, RIG SERVICE
3.50	-	000002, DRL
0.25	-	000006, SURVEY
3.50	-	000004, TRIP
0.75	-	000022, CUT DRL LINE
0.25	-	000021, RIG SERVICE
1.00	-	000004, TRIP
0.50	-	000037, FILL PIPE WASH 40 FT TO BTM
6.00	-	000002, DRL
0.25	-	000021, RIG SERVICE
5.75	-	000002, DRL

*** 10/11/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 15

OPERATIONS: TD 7263 FT, DRL, 736

MUD: DEPTH 7245 FT, LSND POLYMER, 8.8 PPG, VISC. 40, FL 10.0, PH 9.0, PV 11,
YP 13, GELS 5/15, SOLIDS 3.4%, CL 400, CA 140, MBT 17.5, PF 0.4, MF 1.0,
PM 1.2

BIT AND HYDRAULICS: BIT #00014, 8.750 IN, 283T, JETS 11/11/11/-, 1110 FT,

34.75 HRS, WOB 24, 75 RPM, SERIAL #101P15, PP 1350 PSI, 7 GPM,

PMP #1: SIZE 6.00 X 8.00 X 102 SPM

DEVIATION: DEPTH 6612 FT, INCL 1.25 DEG, DIR NOOE

DEPTH 6864 FT, INCL 1.25 DEG, DIR NOOE

TIME: DRL 23.00, SURVEY 0.50, SERVICE RIG 0.50

COSTS: DAILY WELL \$11077, CUM WELL \$204251

REMARKS: DRL X STRATABIT

MUD ADDITIVES: TYPE-VISCOSIFIERS, 4400.00 GEL LB,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

13

TYPE-INHIBITORS FOR CORROSION, 4.00 LOSOL QT,
TYPE-INHIBITORS FOR CORROSION, 1.00 FILMINE GAL,
TYPE-ALKALINITY, PH CONTROL, 200.00 SODA ASH LB,
TYPE-SHALE CONTROL, 3.00 NEW DRL GAL,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 180.00 FLC LB,
TYPE-ALKALINITY, PH CONTROL, 50.00 CAUSTIC LB,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
0.25 - 000021, RIG SERVICE
1.00 - 000002, DRL
0.25 - 000006, SURVEY
6.50 - 000002, DRL
0.25 - 000006, SURVEY
7.75 - 000002, DRL
0.25 - 000021, RIG SERVICE
5.75 - 000002, DRL

*** 10/12/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 16

OPERATIONS: TD 7648 FT, DRL, FM GLLP, 385

MUD: DEPTH 7600 FT, LSND POLYMER, 8.8 PPG, VISC. 46, FL 8.6, PH 8.5, PV 15,

YP 13, GELS 3/11, SOLIDS 4.0%, CL 400, CA 140

BIT AND HYDRAULICS: BIT #00014, 8.750 IN, 2B3T, JETS 10/10/10/-,

DEPTH OUT 7616 FT, 1464 FT, 48.25 HRS, WOB 24, 75 RPM, CONDITION 3/-/-/-,

SERIAL #101P15, PP 1400 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM

BIT #00015, 8.750 IN, J33, JETS 12/12/-/-, 32 FT, SERIAL #0000005796

DEVIATION: DEPTH 7362 FT, INCL 1.25 DEG, DIR NOOE

DEPTH 7608 FT, INCL 1.50 DEG, DIR NOOE

TIME: DRL 15.50, TRIP 6.00, SURVEY 0.50, SERVICE RIG 1.00, OTHER: 1.00 HRS

COSTS: DAILY WELL \$4500, CUM WELL \$208851

MUD ADDITIVES: TYPE-VISCOSIFIERS, 8500.00 GEL LB,

TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 80.00 FLC LB,

TYPE-SHALE CONTROL, 10.00 NEW DRL GAL,

TYPE-OTHER, 2.00 FORMALDAHYDE QT,

TYPE-ALKALINITY, PH CONTROL, 80.00 CAUSTIC LB,

TYPE-INHIBITORS FOR CORROSION, 5.00 LOSOL QT,

TYPE-ALKALINITY, PH CONTROL, 200.00 SODA ASH LB,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
0.25 - RIG SERVICE
1.50 - 000002, DRL
0.50 - SURVEY
5.75 - 000002, DRL
0.25 - RIG SERVICE
4.25 - 000002, DRL
0.50 - MIX PILL
3.00 - 000004, TO

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

14

0.50 - SERVICE RIG WORK BLIND
3.00 - 000004, TI
0.50 - FILL PIPE WASH 30 FT BTM
2.00 - 000002, DRL

*** 10/13/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 17
OPERATIONS: TD 8016 FT, DRL, FM GLLP, 368
MUD: DEPTH 8000 FT, LSND POLYMER, 8.9 PPG, VISC. 55, FL 8.9, PH 9.0, PV 18,
YP 18, GELS 4/18, SOLIDS 3.5%, CL 500, CA 120, MBT 17.5, PF 0.3, MF 0.7,
PM 0.8
BIT AND HYDRAULICS: BIT #00015, 8.750 IN, J33, JETS 12/12/-/-, 400 FT,
25.00 HRS, WOB 45, 65 RPM, SERIAL #F796, PP 1700 PSI, 7 GPM,
PMP #1: SIZE 6.00 X 8.00 X 102 SPM
TIME: DRL 23.25, SERVICE RIG 0.75
COSTS: DAILY WELL \$7729, CUM WELL \$216580
MUD ADDITIVES: TYPE-VISCOSIFIERS, 5000.00 GEL LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 40.00 DRISPAC LB,
TYPE-ALKALINITY, PH CONTROL, 100.00 CAUSTIC LB,
TYPE-INHIBITORS FOR CORROSION, 2.00 FILIMINE GAL,
TYPE-ALKALINITY, PH CONTROL, 100.00 SODA ASH LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 30.00 FLC LB,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
0.25 - 000021, RIG SERVICE
7.75 - 000002, DRL
0.25 - 000021, RIG SERVICE
7.75 - 000002, DRL
0.25 - 000021, RIG SERVICE
5.75 - 000002, DRL

*** 10/14/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 18
OPERATIONS: TD 8216 FT, TRIP, FM DKOT, 200
MUD: DEPTH 8200 FT, LSND POLYMER, 8.9 PPG, VISC. 63, FL 8.9, PH 9.0, PV 25,
YP 20, GELS 5/12, SOLIDS 3.9%, CL 400, CA 120, MBT 20.0, PF 0.4, MF 0.8,
PM 0.9
BIT AND HYDRAULICS: BIT #00015, 8.750 IN, F3, JETS 12/12/-/-,
DEPTH OUT 8216 FT, 600 FT, 45.00 HRS, WOB 45, 60 RPM, SERIAL #F796,
PP 1700 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM
DEVIATION: DEPTH 8106 FT, INCL 1.50 DEG, DIR NOOE
TIME: DRL 20.00, TRIP 2.75, SURVEY 0.50, SERVICE RIG 0.75

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

15

COSTS: DAILY WELL \$4981, CUM WELL \$221561

MUD ADDITIVES: TYPE-VISCOFIFIERS, 7100.00 GEL LB,
TYPE-INHIBITORS FOR CORROSION, 4.00 FILIMINE GAL,
TYPE-ALKALINITY, PH CONTROL, 1000.00 CAUSTIC LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 50.00 DRISPAC LB,
TYPE-OTHER, 8.00 LOSOL QT,
TYPE-ALKALINITY, PH CONTROL, 300.00 SODA ASH,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 160.00 FLC LB,

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000002, DRL
0.25 - 000021, RIG SERVICE
7.75 - 000002, DRL
0.25 - 000021, RIG SERVICE
7.75 - 000002, DRL
0.25 - 000021, RIG SERVICE
2.50 - 000002, DRL
0.50 - 000006, SURVEY
2.75 - 000004, TI

*** 10/15/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 19

OPERATIONS: TD 8370 FT, CIRC, 154

MUD: DEPTH 8370 FT, LSND POLYMER, 9.0 PPG, VISC. 60, FL 9.5, PH 9.0, PV 23,
YP 21, GELS 5/18, SOLIDS 4.5%, CL 400, CA 120, MBT 20.0, PF 0.3, MF 0.2,
PM 8.5

BIT AND HYDRAULICS: BIT #00015, 8.750 IN, F3, JETS 12/12/-/-,
DEPTH OUT 8216 FT, 600 FT, 45.00 HRS, WOB 45, 60 RPM, SERIAL #F-796,
PP 1700 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM
BIT #00016, 8.250 IN, F3, JETS -/12/13/B, DEPTH OUT 8370 FT, 154 FT,
14.00 HRS, WOB 45, 60 RPM, SERIAL #F-929, PP 1700 PSI, 7 GPM,
PMP #1: SIZE 6.00 X 8.00 X 102 SPM

TIME: DRL 14.00, TRIP 4.50, CIRC 4.75, SERVICE RIG 0.50, OTHER: 0.25 HRS

COSTS: DAILY WELL \$7614, CUM WELL \$229175

MUD ADDITIVES: TYPE-VISCOFIFIERS, 8000.00 GEL LB,
TYPE-ALKALINITY, PH CONTROL, 100.00 CAUSTIC LB,
TYPE-ALKALINITY, PH CONTROL, 100.00 SODA ASH LB,
TYPE-MATERIAL FOR WEIGHTING, 2550.00 BAR LB,
TYPE-FILTRATE REDUCERS (FLUID LOSS CONTROL), 80.00 FIC LB,

CHRON TIME DISTRIBUTION (HRS):

3.50 - 000004, TRIP
0.25 - 000037, FILL X WASH TO BTM
6.25 - 000002, DRL
0.25 - 000021, SERVICE RIG
7.75 - 000002, DRL
0.25 - 000021, SERVICE RIG
0.50 - 000004, TRIP SHORT
2.00 - 000019, CIRC FOR LOGS

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/37 *** PAGE

16

0.50 - 000004, SHORT TRIP
2.00 - 000075, CIRC WCC
LOGS: 10/15/85, INDUCTION LOG,
TOP DEPTH 547 FT, BTM DEPTH 8356 FT, BHT 175 F,
SERVICE COMPANY-SCHLUMBERGER

*** 10/16/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 20
OPERATIONS: TD 8370 FT, LOG FDT, FM DKOT
MUD: DEPTH 8370 FT, LSND POLYMER, 9.0 PPG, VISC. 68, FL 7.8, PH 9.0, PV 22,
YP 20, GELS 5/17, SOLIDS 4.8%, CL 400, CA 140, MBT 20.0, FILTER CAKE 1,
PF 0.4, MF 0.9, PM 0.9
BIT AND HYDRAULICS: BIT 000016, 8.250 IN, F3, JETS 12/13/8 /-,
DEPTH OUT 8370 FT, 154 FT, 14.00 HRS, WOB 45, 60 RPM, CONDITION 8/7/I/-,
SERIAL #F929, PP 1700 PSI, 7 GPM, PMP #1: SIZE 6.00 X 8.00 X 102 SPM
TIME: TRIP 4.25, SURVEY 0.25, LOGGING 16.00, OTHER: 3.50 HRS
COSTS: DAILY WELL \$20565, CUM WELL \$249740
REMARKS: RAN DUAL INDUCTION; DENSITY NEUTRON X RUN FDT X SCHLUMBERGER
CHRON TIME DISTRIBUTION (HRS):
3.50 - 000013, WOO
0.25 - 000006, SURVEY
4.25 - 000004, TRIP
16.00 - 000017, LOG
LOGS: 10/16/85, DENSITY POROSITY LOG,
TOP DEPTH 547 FT, BTM DEPTH 8360 FT, BHT 175 F,
SERVICE COMPANY-SCHLUMBERGER
10/16/85, DIPMETER,
TOP DEPTH 6700 FT, BTM DEPTH 8365 FT, BHT 175 F,
SERVICE COMPANY-SCHLUMBERGER
10/16/85, MICRO LOG,
TOP DEPTH 3400 FT, BTM DEPTH 8320 FT, BHT 175 F,
SERVICE COMPANY-SCHLUMBERGER

*** 10/17/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FOUR CORNERS 4, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 21
OPERATIONS: TD 8370 FT, RUN 7 INCH CSG
MUD: DEPTH 8370 FT, LSND POLYMER, 9.0 PPG, VISC. 45, FL 8.0, PH 9.0, PV 22,
YP 20, GELS 5/18, SOLIDS 4.8%, CL 400, CA 140, MBT 20.0, PF 0.3, MF 0.7,
PM 0.3
TIME: TRIP 2.75, CSG & CMT 2.25, LOGGING 9.00, CIRC 0.25, COND MUD 2.75,
CUT DRL LINE 1.00, LD DP & DC 5.25, RU TOOLS 0.75
COSTS: DAILY WELL \$32326, CUM WELL \$282066

CASING: PRODUCTION, SET 8358 FT, 10/17/85

MUD ADDITIVES: TYPE-THINNERS, DISPERSANTS, 100.00 DESCO LB,

CHRON TIME DISTRIBUTION (HRS):

9.00 - 000017, LOG
1.00 - 000022, CUT DRL LINE
1.50 - 000004, TI
0.25 - 000019, CIRC AT 4909 FT
1.25 - 000004, TI
2.75 - 000019, CIRC 8370 FT
5.25 - 000029, LDDP
0.75 - 000033, CHANGE RAMS
2.25 - 000011, RUN CSG

DETAIL: BOTTOM 59.0 FT, 7.000 IN, WT 26.00 #/FT,
GRADE K55, CONNECTION 8 RD LT&C, NO OF JTS. 2
TOP 59.0 FT, BOTTOM 5752.9 FT, 7.000 IN, WT 23.00 #/FT,
GRADE K55, CONNECTION 8 RD LT&C, NO OF JTS. 136
TOP 5752.9 FT, BOTTOM 8358.4 FT, 7.000 IN, WT 26.00 #/FT,
GRADE K55, CONNECTION 8 RD LT&C, NO OF JTS. 59

TOOLS: TYPE-NON-RIGID CENTRALIZERS, TOP 4456.0 FT, BOTTOM 8341.0 FT,
NO. OF TOOLS 10, NAME-STD RECTOR CENTR
TYPE-DV TOOL, TOP 4478.4 FT, BOTTOM 4480.6 FT,
NO. OF TOOLS 1, NAME-7 INCH RECTOR STAGE TOOL
TYPE-DV TOOL, TOP 5929.1 FT, BOTTOM 5931.3 FT,
NO. OF TOOLS 1, NAME-7 INCH RECTOR STAGE TOOL
TYPE-FLOAT COLLAR, TOP 8311.7 FT, BOTTOM 8312.9 FT,
NO. OF TOOLS 1, NAME-SELF FILL FC RECTOR
TYPE-GUIDE SHOE, TOP 8357.4 FT, BOTTOM 8358.4 FT,
NO. OF TOOLS 1, NAME-CMT NOSE GUIDE SHOE
TYPE-OTHER, TOP 4456.0 FT, BOTTOM 8341.0 FT,
NO. OF TOOLS 10, NAME-STD 7INCH RECTOR STOPRINGS

PRIMARY CEMENTING REPORT: STAGE 1, BATCH 1, API CLASS B,
PORTLAND, VOL 434 SX,
SLURRY DENSITY 13.9 PPG,
HOLE FLUID DENSITY 9.0 PPG, TYPE-MUD,
AVG. DISPLACEMENT PRES 1100 PSI,
AVG. DISPLACEMENT RATE 6.0 BPM,
PRE-FLUSH WATER, 10 BBLs, DENSITY 8.4 PPG,
DISPLACEMENT FLUID-WATER, DENSITY 8.8 PPG,
PIPE MOVEMENT-STATIONARY,
RETURN FLOW 99.0%,
SUCCESS FLAG = YES
STAGE 2, BATCH 1, API CLASS B,
PORTLAND, VOL 373 SX,
SLURRY DENSITY 13.9 PPG,
HOLE FLUID DENSITY 8.8 PPG, TYPE-MUD,
AVG. DISPLACEMENT PRES 900 PSI,
AVG. DISPLACEMENT RATE 6.0 BPM,
PRE-FLUSH WATER, 10 BBLs, DENSITY 8.4 PPG,
DISPLACEMENT FLUID-WATER, DENSITY 8.8 PPG,
PIPE MOVEMENT-STATIONARY,
RETURN FLOW 99.0%,
SUCCESS FLAG = YES

STAGE 3, BATCH 1, API CLASS B,
PORTLAND, VOL 1015 SX,
SLURRY DENSITY 13.5 PPG,
HOLE FLUID DENSITY 8.8 PPG, TYPE-MUD,
AVG. DISPLACEMENT PRES 1000 PSI,
AVG. DISPLACEMENT RATE 5.5 BPM,
PRE-FLUSH WATER, 10 BBLS, DENSITY 8.4 PPG,
DISPLACEMENT FLUID-WATER, DENSITY 8.4 PPG,
PIPE MOVEMENT-STATIONARY,
RETURN FLOW 50.0%

ADDITIVES:

TYPE-ACCELERATOR, SALT NACL 10.00 %
TYPE-WEIGHT REDUCER, POZALIN 50.00 %
TYPE-LOST CIRCULATION CONTROL, CELLOPHANE FLAKE 0.25 LB/SX
TYPE-FILTRATION OR WATER LOSS CONTROL, FL-19 FLA 0.50 %
TYPE-DISPERSANT OR FRICTION REDUCER, GEL 2.00 %
TYPE-WEIGHT REDUCER, POZALIN 50.00 %
TYPE-DISPERSANT OR FRICTION REDUCER, GEL 2.00 %
TYPE-ACCELERATOR, GYPSEAL 10.00 %
TYPE-ACCELERATOR, SALT NACL 10.00 %
TYPE-WEIGHT REDUCER, POZALIN 50.00 %
TYPE-LOST CIRCULATION CONTROL, CELLOPHANE FLAKE 0.25 LB/SX
TYPE-DISPERSANT OR FRICTION REDUCER, GEL 2.00 %

*** 10/18/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 22

OPERATIONS: TD 8370 FT, RREL, FM DKOT

MUD: DEPTH 1053 FT, LSND POLYMER, 9.0 PPG

TIME: CSG & CMT 8.50, CIRC 7.00, ND 1.00, OTHER: 7.50 HRS

COSTS: DAILY WELL \$148334, CUM WELL \$430400

REMARKS: RAN 7 INCH CSG; LAND AT 8358; CTD X CMT IN 3 STAGES PLUG DN

STAGE 3AT 0045 HR 101885; NO CMT CIRC ANY STAGE

.25 INCH 140000 LB 180000 SW; CIRC X COND HOLE LOG VISC 68

SEC/GT; THIN MUD TO 42 SEC/GT; LDDP X CC; RAN 3878 FT 7 INCH

CSG; CROSS THREADED TOP CONN ON UPPER STAGE TOOL; WD TOOL 2.5 HR

CSG DISP THRU CSG NOT ANNULUS; FIN RUN CSG; HAD 2 INCH FLW UP

ANNULUS; STUCK CSG WHILE MAKING UP CMT HEAD; CSG FREE WHEN

CIRC WAS EST; CLEAN OUT 20 FT FILL TO 8368 TD; NC CMT CIRC

ANY STAGE

MUD ADDITIVES: TYPE-THINNERS, DISPERSANTS, 150.00 DESCO LB,

CHRON TIME DISTRIBUTION (HRS):

1.00 - 000019, CIRC 7 INCH

0.75 - 000011, RUN 7 INCH CSG

2.25 - 000037, WD DV TOOL

4.00 - 000011, RUN 7 INCH CSG

1.00 - 000024, WASH 7 INCH TBG 20 FT

1.50 - 000011, CMT 1ST STAGE

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

19

3.00 - 000019, OPEN DV X CIRC 2ND STAGE
1.00 - 000011, CMT 2ND STAGE
3.00 - 000019, OPEN DV X CIRC FOR 3RD STAGE
1.25 - 000011, CMT 3RD STAGE
1.00 - 000027, ND
4.25 - 000037, SET SLIPS X CUT CSG X RD

*** 10/21/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 25
OPERATIONS: TD 8370 FT, SI; WOSU
COSTS: CUM WELL \$430400

*** 10/22/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 26
OPERATIONS: TD 8370 FT, SI; WOSU
COSTS: CUM WELL \$430400

*** 10/23/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 27
OPERATIONS: TD 8358 FT, P8TD 8311, MIRUSU
PERTINENT DATA: RIG MOVE ON 10/23/85, RIG RELEASED 11/26/85
COSTS: CUM WELL \$430400
RIG CONTRACT DATA: CONTRACTOR BA CODE 433158, BIG A, RIG #0008, SERVICE UNIT

*** 10/24/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 28
OPERATIONS: TD 8358 FT, P8TD 8311, PU TBG
COSTS: CUM WELL \$430400
CHRON TIME DISTRIBUTION (HRS):
8.00 - 000037, MIRUSU
1.00 - 000037, NU SPOOL
1.50 - 000037, NU BOP

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

20

0.50 - 000037, STRAP PIPE
13.50 - 000037, SIFN

*** 10/25/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 29

OPERATIONS: TD 8358 FT, PBTD 8311, TI X DRL SECOND DV

COSTS: DAILY WELL \$2404, CUM WELL \$432804

REMARKS: TAG 75 FT CMT ON FIRST DV TOOL; CSG SCRAPER TORQUING UP; WORK
TBG FREE; TO; CSG SCRAPER ELEMENTS CAME OUT LOST 1 KEEPER RING
ALL ELEMENTS REC

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000037, PICK UP TBG
4.00 - 000037, DRL DV AT 4417 FT
0.50 - 000037, PICK UP TBG
2.00 - 000037, WORK TBG
2.50 - 000004, TO TBG
13.00 - 000037, SD FOR NIGHT

*** 10/26/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 30

OPERATIONS: TD 8358 FT, PBTD 8311, TI X NEW BIT

COSTS: DAILY WELL \$1909, CUM WELL \$434713

REMARKS: 20 FT CMT ON SECOND DV TOOL

CHRON TIME DISTRIBUTION (HRS):

2.00 - 000004, TI BIT X TBG
9.00 - 000037, DRL DV TOOL AT 5929 FT
1.00 - 000037, TO FOR BIT
12.00 - 000037, SD FOR NIGHT

*** 10/27/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 31

OPERATIONS: TD 8358 FT, PBTD 8311, SD FOR NIGHT

COSTS: CUM WELL \$434713

CHRON TIME DISTRIBUTION (HRS):

4.00 - 000037, DRL DV
2.00 - 000004, TI
2.00 - 000037, CO TO PBD

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

21

1.00 - 000037, PR TST
1.00 - 000037, CIRC HOLE 2% KCL
2.00 - 000004, TO TSG
12.00 - 000037, SD FOR NIGHT

*** 10/28/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 32
OPERATIONS: TD 8358 FT, PBTD 8311, RUN CBL
COSTS: CUM WELL \$434713
CHRON TIME DISTRIBUTION (HRS):
24.00 - 000037, SD FOR NIGHT

*** 10/29/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 33
OPERATIONS: TD 8358 FT, PBTD 8311, TI X BLOW HOLE DN
COSTS: CUM WELL \$434713
REMARKS: JUNK BASKET STOPPED AT DV AT 5929 FT
CHRON TIME DISTRIBUTION (HRS):
10.00 - 000037, RUN CBL X JUNK BASKET
14.00 - 000037, SD FOR NIGHT
PERFORATIONS: 10/29/85, TOP 7334 FT, BOTTOM 7444 FT, TYPE-OPEN,
SHOTS/FT. 1, PERF DIAM. 0.500 IN, TOTAL NO. SHOT 110,
GUN-NON-EXPENDABLE, SIZE 4.000 IN, PHASING 120 DEG,
FLUID TRT-WATER, DENSITY 8.3 PPG, LEVEL 6500 FT

*** 10/30/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 34
OPERATIONS: TD 8358 FT, PBTD 8311, LOAD X WO GUNS
COSTS: DAILY WELL \$27942, CUM WELL \$462655
REMARKS: BLW HOLE DN TO 6500 FT
CHRON TIME DISTRIBUTION (HRS):
3.00 - 000004, TI X BLW HOLE DN
2.00 - 000004, TO
7.00 - 000037, MADE 5 GUN RUNS
12.00 - 000037, SIFN

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

22

*** 10/31/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 35

OPERATIONS: TD 8358 FT, PBTD 8311, PERF GALLUP

COSTS: DAILY WELL \$11831, CUM WELL \$474536

REMARKS: WAIT OF PERF CO TO LOAD GUNS

CHRON TIME DISTRIBUTION (HRS):

24.00 - 000037, SD FOR LOADING GUNS

PERFORATIONS: 10/31/85, TOP 6916 FT, BOTTOM 7334 FT, TYPE-OPEN,
SHOTS/FT. 1, PERF DIAM. 0.500 IN, TOTAL NO. SHOT 418,
GUN-NON-EXPENDABLE, SIZE 4.000 IN, PHASING 120 DEG,
FLUID TRT-WATER, DENSITY 8.3 PPG, LEVEL 6370 FT,
CONTINUOUS PERFORATIONS

*** 11/01/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 36

OPERATIONS: TD 8358 FT, PBTD 8311, TI PKR X SWB TST

COSTS: DAILY WELL \$8610, CUM WELL \$483146

REMARKS: PERF 19 GUN RUNS; TOTAL GLLP PERFS 6916-7444

CHRON TIME DISTRIBUTION (HRS):

11.00 - 000037, PERF

13.00 - 000037, SI

*** 11/02/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 37

OPERATIONS: TD 8358 FT, PBTD 8311, SI X PREPARE FRAC

COSTS: DAILY WELL \$19045, CUM WELL \$502191

REMARKS: SI

*** 11/03/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 38

OPERATIONS: TD 8358 FT, PBTD 8311, SI

COSTS: CUM WELL \$502191

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

23

*** 11/04/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 39

OPERATIONS: TD 8358 FT, PBTD 8311, FRAC GLLP 6916-7444

COSTS: CUM WELL \$502191

REMARKS: SI

COMPL, RECOMPL, REPAIR OPERATIONS: 11/04/85, TYPE-FLUID TREATMENT,
TOP DEPTH 6910 FT, BOTTOM 7440 FT

FLUID TREATMENT: NO. 1, OTHER FRAC, 270000 GALS,

BREAKDOWN PRES 2150 PSI, BREAKDOWN RATE 11.00 BPM,

INJ PRES 2000 PSI, INJ RATE 52.00 BPM,

INJ STRING-CASING,

DISP. FLUID 262.0 BBL, OTHER,

INIT SITP 170 PSI,

SITP AFT 2600 PSI

TREATMENT COMPONENTS: GELLING AGENT,

WGH-8 GEL, 30.00 LB/1000GL

CROSSLINK AGENT,

CX1 X LINKER, 1.00 GL/1000GL

PROPPING AGENT,

20-40 MESH BRADY SN, 440.00 THOU LB

TRACER MATERIAL,

IRIDIUM 192, 220.00 ML

CLAY CONTROL,

KCL, 2.00 %

EMULSIFIER,

SAA-1 SURF, 1.00 GL/1000GL

OTHER,

BWG BUFFER, 100.00 LB

OTHER,

CDAL CHEM DELAY, 0.50 GL/1000GL

OTHER,

WCB-1 X WEB-1 BRKR, 130.00 LB

*** 11/05/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 40

OPERATIONS: TD 8358 FT, PBTD 8311, SI TO HEAL FRAC

COSTS: DAILY WELL \$140946, CUM WELL \$643137

REMARKS: FRAC GLLP 6910-7440 DN CSG X 270000 GAL 30% XLINK GEL X

440000 LB SN AS FOLLOWS: 120000 GAL PAD; 20000 GAL 1 PPG;

30000 GAL 2 PPG; 40000 GAL 3 PPG; 60000 GAL 4 PPG;

X 262 BBL FLUSH; ISIP 2600; 5 MIN 2375; 10 MIN 2250;

15 MIN 2200; AVG RATE 52 BPM; AVG PR 2000; MAX PR 3300;

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

24

MIN PR 1940; SI TO LET FRAC HEAL

*** 11/06/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 41

OPERATIONS: TD 8358 FT, PBTD 8311, FLW BACK FRAC

COSTS: DAILY WELL \$12732, CUM WELL \$655869

REMARKS: SI TO LET FRAC HEAL

*** 11/07/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 42

OPERATIONS: TD 8358 FT, PBTD 8311, FLW BACK FRAC

COSTS: DAILY WELL \$2039, CUM WELL \$657908

REMARKS: BLW 736; BLWTR 5954; SICP 1125; OPEN UP X FLW BACK FRAC 21 HR

ON 16/64 CH; 80 O; NO SN; CPF 470

*** 11/08/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 43

OPERATIONS: TD 8358 FT, PBTD 8311, FLW BACK FRAC

COSTS: CUM WELL \$657908

REMARKS: 208 BLW; 5746 BLWTR; FLW WELL 17 HR; 208 BW; 0 BO; CP 450;

SEP 248; STATIC 7.2; DIFF 4.8; 179 MCFD; .625 INCH PLATE;

16/64 INCH CH; 5746 BBL LEFT TO REC; WELL WAS SI FOR 2 HR DUE

TO WELL MAKING A LITTLE SN FOR AWHILE

*** 11/09/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 44

OPERATIONS: TD 8358 FT, PBTD 8311, FLW TST GLLP

COSTS: DAILY WELL \$4556, CUM WELL \$662464

REMARKS: 310 BLW; 5436 BLWTR; 9.4 BNC; FLW 24 HR; 31C BW; 9.4 BO; CPF 440

SEP 242; STATIC 6.5; DIFF 3.4; 222 MCFD; .875 INCH PLATE; 88 DEG

TEMP; 16/64 INCH CH

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

25

*** 11/10/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 45

OPERATIONS: TD 8358 FT, P8TD 8311, FLW TST GLLP

COSTS: CUM WELL \$662464

REMARKS: 384 BLW; 5052 BLWTR; 10.8 BNO; FLW 24 HR; 384 BW; 10.8 30;

CPF 540; SEP 242; STATIC 6.5; DIFF 5.4; 353 MCFD; .975 INCH

PLATE; 82 DEG TEMP; 16/64 INCH CH

*** 11/11/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 46

OPERATIONS: TD 8358 FT, P8TD 8311, FLW TST GLLP

COSTS: CUM WELL \$662464

REMARKS: 43 BLW; 5009 BLWTR; 5.2 BNO; FLW 24 HR; 43 BW; 5.2 30; CPF 380

SEP 202; STATIC 6.5; DIFF 4.6; 389 MCFD; 1.00 INCH PLATE

16/64 INCH CH; 84 DEG TEMP

*** 11/12/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 47

OPERATIONS: TD 8358 FT, P8TD 8311, FLW TST GLLP

COSTS: CUM WELL \$662464

REMARKS: 95 BLW; 4914 BLWTR; FLW 24 HR; 95 BW; 0 30; CP 270; SEP 187

STATIC 6.3; DIFF 4.0; 337 MCFD; 1.00 INCH PLATE; 16/64 INCH

CH; 84 DEG TEMP

*** 11/13/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 48

OPERATIONS: TD 8358 FT, P8TD 8311, FLW TST GLLP

COSTS: DAILY WELL \$3280, CUM WELL \$665744

REMARKS: BLW 73; BLWTR 4841; BNO 0; FLW 24 HR; CP 250; SEP 139;

STATIC 5.8; DIFF 4; 323 MCFD; 1.0 PLATE; 24/64 CH; 81 DEG TEMP

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

26

*** 11/14/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 49

OPERATIONS: TD 8358 FT, PBTD 8311, FLW TST GLLP

COSTS: DAILY WELL \$3706, CUM WELL \$669450

REMARKS: 59 BLW; 4782 BLWTR; 1.7 BNO; FLW 24 HR; 59 BW; 1.7 BNO; CP
200; SEP 140; STATIC 5.5; DIFF 4.4; 324 MCFD; 1.00 INCH PLATE
24/64 INCH CH; 90 DEG TEMP; RAN GR TRACER SURVEY

*** 11/15/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 50

OPERATIONS: TD 8358 FT, PBTD 8311, SWB, FM GLLP

COSTS: DAILY WELL \$3849, CUM WELL \$673299

REMARKS: BNO 3; FLW 3 HR; CP 200; SEP 140; STATIC 5.5; DIFF 4.4;
MCFD 323; 1 INCH PLATE; 24/64 CH; 77 DEG TEMP; KILL WELL X
TI X TBG TO 6900 FT; WOULD NOT FLW; SIFN

*** 11/16/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 51

OPERATIONS: TD 8358 FT, PBTD 8311, FLW TST GLLP

COSTS: DAILY WELL \$722, CUM WELL \$674021

REMARKS: BLW 92; BLWTR 4690; SICP 900; SITP 700; TBG BLED DN IN 15 MIN;
RU TO SWB; MADE 4 RUNS X WELL KICKED OFF; IFL 1800; FFL 800;
FLW 18 HR; 49 BW; 0 BQ; CP 300; TP 150; SEP 193; STATIC 6.4;
DIFF 3.8; 325 MCFD; 1.0 PLATE; 24/64 CH; 84 DEG TEMP

*** 11/17/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 52

OPERATIONS: TD 8358 FT, PBTD 8311, FLW TST GLLP

COSTS: CUM WELL \$674021

REMARKS: BLW 40; BLWTR 4650; FLW 24 HR; BO 0; CP 295; TP 80; SEP 69;
STATIC 4; DIFF 2.6; 139 MCFD; 1.0 PLATE; 20/64 CH; 80 DEG TEMP

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

27

*** 11/18/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 53

OPERATIONS: TD 8358 FT, PBD 8311, FLW TST GLLP

COSTS: CUM WELL \$674021

REMARKS: BLW 20; BLWTR 4630; BNO 0; FLW 24 HR; CP 290; TP 120; SEP 39;
STATIC 3; DIFF 4.8; 192 MCFD; 1.0 PLATE; 18/64 CH; 42 DEG TEMP

*** 11/19/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 54

OPERATIONS: TD 8358 FT, PBD 8311, FLW TST GLLP

COSTS: DAILY WELL \$3278, CUM WELL \$677299

REMARKS: BLW 13; BLWTR 4617; FLW 24 HR; 0 BO; CP 260; TP 90; SEP 34;
STATIC 3; DIFF 5.7; 228 MCFD; 1.0 PLATE; 18/64 CH; 72 DEG TEMP

*** 11/20/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 55

OPERATIONS: TD 8358 FT, PBD 8311, FLW TST GLLP

COSTS: DAILY WELL \$5070, CUM WELL \$682369

REMARKS: 18 BLW; 4599 BLWTR; FLW 24 HR; 18 BW; 0 BO; CP 280; TP 95; SEP
34; STATIC 3.0; DIFF 4.6; 185 MCFD; 1.00 INCH PLATE; 16/64 INCH
CH; 62 DEG TEMP

*** 11/21/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 56

OPERATIONS: TD 8358 FT, PBD 8311, FLW TST GLLP

COSTS: CUM WELL \$682369

REMARKS: BLW 12; BLWTR 4587; FLW 24 HR; 0 BO; CP 360; TP 120; SEP 34;
STATIC 3; DIFF 5.4; 216 MCFD; 1.0 PLATE; 13/64 CH; 90 TEMP

*** 11/22/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

28

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 57
OPERATIONS: TD 8358 FT, PBTD 8311, FLW TST GLLP
COSTS: CUM WELL \$632369
REMARKS: 10 BLW: 4577 BLWTR: FLW 24 HR: 10 BW: 0 BO: CP 310: TP 60: SEP
34: STATIC 3.0: DIFF 5.4: 216 MCFD: 1.00 INCH PLATE: 20/64 INCH
CH: 86 DEG TEMP

*** 11/23/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 58
OPERATIONS: TD 8358 FT, PBTD 8311, FLW TST GLLP
COSTS: DAILY WELL \$14390, CUM WELL \$696759
REMARKS: 4577 BLWTR: FLW 24 HR: 0 BW: 0 BO: CP 180: TP 80: SEP 34:
STATIC 3.0: DIFF 8.0: 371 MCFD: 1.00 INCH PLATE: 32/64 INCH
CH: 72 DEG TEMP

*** 11/24/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 59
OPERATIONS: TD 8358 FT, PBTD 8311, FLW TST GLLP
COSTS: CUM WELL \$696759
REMARKS: 6 BLW: 4571 BLWTR: FLW 24 HR: 6 BW: 0 BO: CP 260: TP 46: SEP
34: STATIC 3.0: DIFF 3.5: 172 MCFD: 1.5 INCH PLATE: 32/64 INCH
CH: 65 DEG TEMP

*** 11/25/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 60
OPERATIONS: TD 8358 FT, PBTD 8311, FLW TST GLLP
COSTS: CUM WELL \$696759
REMARKS: 3 BLW: 4568 BLWTR: FLW 24 HR: 3 BW: 0 BO: CP 340: TP 80: SEP 34
STATIC 3.0: DIFF 2.4: 152 MCFD: 1.25 INCH PLATE: 32/64 INCH
CH: 62 DEG TEMP

*** 11/26/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, BIG A 8, AMOCO PRODUCTION,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

29

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 61
OPERATIONS: TD 8358 FT, P8TD 8311, FLW TST GLLP
COSTS: CUM WELL \$696759
REMARKS: 2 BLW: 4566 BLWTR; FLW 3 HR; 2 BW; 0 BO; CP 300; TP 80; 34 SEP
STATIC 3.0; DIFF 3.5; MCF 222.3; PLATE 1.250; CH 32/64; RUN
TEMP 70 DEG

*** 11/27/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 62
OPERATIONS: TD 8358 FT, P8TD 8311, HOOKING UP TST SEP
COSTS: DAILY WELL \$4764, CUM WELL \$701523
REMARKS: 4566 BLWTR; FLW 0 HR; HOOKING UP SEP

*** 11/28/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 63
OPERATIONS: TD 8358 FT, P8TD 8311, FLW WELL BACK
COSTS: DAILY WELL \$750, CUM WELL \$702273
REMARKS: 16 BLW: 4550 BLWTR; 15 HR FLW; FCP 230; FTP 100; STATIC 3.5;
DIFF 2.4; PLATE 1.5 INCH; CH 32/64; MCFD 265.7; TEMP 70 DEG
SEP 50

*** 11/29/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 64
OPERATIONS: TD 8358 FT, P8TD 8311, FLW WELL BACK
COSTS: DAILY WELL \$750, CUM WELL \$703023
REMARKS: 5 BLW: 4545 BLWTR; 24 HR FLW; FCP 250; FTP 105; STATIC 3.5
DIFF 1.5; PLATE 1.5 INCH; CH 33/64; MCFD 163.0; TEMP 70 DEG
SEP 50

*** 11/30/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

30

AMOCO W.I. 1.0000, DAYS FROM SPUD 65
OPERATIONS: TD 8353 FT, PSTD 8311, FLW WELL BACK
COSTS: DAILY WELL \$750, CUM WELL \$703773
REMARKS: 14 BLW: 4531 BLWTR: 24 HR FLW: ACP 200: ATP 50: STATIC 3.5;
DIFF 4.9: PLATE 1 INCH: CH 32/64: MCFD 229: TEMP 63 DEG: SEP 50

*** 12/01/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 66
OPERATIONS: TD 8358 FT, PSTD 8311, FLW WELL BACK
COSTS: DAILY WELL \$750, CUM WELL \$704523
REMARKS: 3 BLW: 4528 BLWTR: 24 HR FLW: FCP 220: FTP 50: STATIC 3.5;
DIFF 2.3: SEP 50: PLATE 1 INCH: CH 32/64: MCFD 107: TEMP 80 DEG

*** 12/02/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 67
OPERATIONS: TD 8358 FT, PSTD 8311, FLW WELL BACK
COSTS: DAILY WELL \$750, CUM WELL \$705273
REMARKS: 2 BLW: 4526 BLWTR: .5 BND: 24 HR FLW: FCP 290: FTP 70: STATIC
3.4: DIFF 2.0: SEP 47: PLATE 1 INCH: CH 32/64: MCFD 91: TEMP
74 DEG

*** 12/03/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 68
OPERATIONS: TD 8358 FT, PSTD 8311, SI FOR EVAL
COSTS: DAILY WELL \$750, CUM WELL \$706023
REMARKS: 2 BLW: 4524 BLWTR: 7 HR FLW: ACP 260: ATP 70: STATIC 3.4: DIFF
2.1: SEP 47: PLATE 1 INCH: CH 32/64: MCFD 95: TEMP 70 DEG

*** 12/04/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 69
OPERATIONS: TD 8358 FT, PSTD 8311, SI
COSTS: CUM WELL \$706023

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

31

*** 12/05/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 70
OPERATIONS: TD 8358 FT, PBD 8311, SI
COSTS: CUM WELL \$706023

*** 12/06/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 71
OPERATIONS: TD 8358 FT, PBD 8311, SI
COSTS: CUM WELL \$706023

*** 12/09/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 74
OPERATIONS: TD 8385 FT, PBD 8311, BLOW WELL DN
PERTINENT DATA: RIG MOVE ON 12/09/85, RIG RELEASED 01/02/86
COSTS: CUM WELL \$706023

REMARKS: TO X SET BP 6050 X TI X SWB WELL 5500 FT; 4524 BLWTR; WELL WAS

SI 120385 FOR EVAL

RIG CONTRACT DATA: CONTRACTOR BA CODE 547541, FARMINGTON, RIG #0027,
SERVICE UNIT

*** 12/10/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 75
OPERATIONS: TD 8385 FT, PBD 8311, TI X PR TST BP
COSTS: DAILY WELL \$1170, CUM WELL \$707193

REMARKS: 121085 ACTIVITY; TI X PR TST TO 2000 PSI FOR 20 MIN X BLOW WELL
AROUND X N2 X PERF 6010 TO 6000 FT X 4 JSPP X 5910 TO 5830 FT
X 4 JSPP IF STILL TIME RUN STATIC PR BOMB

CHPON TIME DISTRIBUTION (HRS):

1.00 - 000013, RUSU

3.50 - 000013, W0 4 INCH FRAC MANIFOLD

2.00 - 000013, RU MANIFOLD

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

32

2.50 - 000013, TO WHILE SLM
2.00 - 000013, SET CAST IRON 3P 6050
0.50 - 000013, FILL WELL X WT
0.50 - 000013, DRAIN PMP

PERFORATIONS: 12/10/85, TOP 5830 FT, BOTTOM 5960 FT, TYPE-OPEN,
SHOTS/FT. 4, PERF DIAM. 0.480 IN, TOTAL NO. SHOT 320,
GUN-NON-EXPENDABLE, SIZE 4.000 IN, PHASING 120 DEG,
FLUID TRT-WATER, DENSITY 8.4 PPG, LEVEL 5410 FT,
CONTINUOUS PERFORATIONS
12/10/85, TOP 6000 FT, BOTTOM 6010 FT, TYPE-OPEN,
SHOTS/FT. 4, PERF DIAM. 0.480 IN, TOTAL NO. SHOT 40,
GUN-NON-EXPENDABLE, SIZE 4.000 IN, PHASING 120 DEG,
FLUID TRT-WATER, DENSITY 8.4 PPG, LEVEL 5410 FT

*** 12/11/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 76

OPERATIONS: TD 8385 FT, PBD 8311, RUN STATIC PR BOMB

COSTS: DAILY WELL \$10782, CUM WELL \$717975

REMARKS: RUN PR BOMB 3 MIN STOPS AT 6005: 5900: 5800: 5000: 4000: 3000:

2000: 1000 X FRAC POINT LOOKOUT X 100000 GAL 75 QUALITY X

125000 LB 20-40 SN: SIFN

CHRON TIME DISTRIBUTION (HRS):

1.00 - 000013, TI TO 5500

2.00 - 000013, FILL HOLE PR TST OK 2000 PSI

3.00 - 000013, WO N2

1.00 - 000013, BLEW WELL X N2

4.00 - 000013, PERF

*** 12/12/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 77

OPERATIONS: TD 8385 FT, PBD 8311, FRAC WELL X NOWSCO

COSTS: DAILY WELL \$1170, CUM WELL \$719145

REMARKS: WT FILTER UNIT WAS LATE X WAS NOT ABLE TO GET FRAC AWAY IN

TIME TO BE DONE BY NIGHT: 121385 ACTIVITY FOR DAY: FRAC

WELL X NOWSCO

CHRON TIME DISTRIBUTION (HRS):

3.00 - 000013, RUN STATIC PR BOMB

1.00 - 000013, WO WT

3.00 - 000013, WO FILTER UNIT

2.50 - 000013, FILTER KCL TANKS

COMPL, RECOMPL, REPAIR OPERATIONS: 12/12/85, TYPE-FLUID TREATMENT

FLUID TREATMENT: NO. 1, OTHER, 25000 GALS,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

33

INJ PRES 2200 PSI, INJ RATE 7.00 BPM,
INJ STRING-CASING, TBG OD 7.000 IN, ID 6.366 IN
NO. 2, FOAM FRAC, 25000 GALS,
INJ PRES 2100 PSI, INJ RATE 8.90 BPM,
INJ STRING-CASING
NO. 3, FOAM FRAC, 10794 GALS,
INJ PRES 1900 PSI, INJ RATE 7.50 BPM,
INJ STRING-CASING
NO. 4, ACID FRAC, 8232 GALS,
INJ PRES 2200 PSI, INJ RATE 6.50 BPM,
INJ STRING-CASING

TREATMENT COMPONENTS: AIR, NITROGEN, GAS,
FOAMER, 163.00 GAL
AIR, NITROGEN, GAS,
N2, 1268.00 K SCF
GELLING AGENT,
20# GEL PER 1000 GAL, 700.00 LB
PROPPING AGENT,
20-40 SN, 128.00 K LB
TRACER MATERIAL,
TRACER MATERIAL, 63.00 MCL
OTHER,
BACTERIA SIDE, 8.00 GAL
OTHER,
BREAKER, 14.00 GAL
OTHER,
BUFFER, 100.00 LB
OTHER,
SURF, 34.00 GAL

*** 12/13/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 78

OPERATIONS: TD 8335 FT, PBTD 6050, FLW BACK FRAC

COSTS: DAILY WELL \$28638, CUM WELL \$747783

REMARKS: BLW 602; FRAC PT LOOKOUT X 128000# 20-40 SN; TAG SN WITH
63 MCL RA MATERIAL; FLUSH TO 5000 FT; PMP TOTAL 1268000 SCF N2
X 602 BBL GEL WTR

CHRON TIME DISTRIBUTION (HRS):

3.00 - PREP TO FRAC; SET POP OFF AT 3900 LB
2.00 - FRAC PT LOOKOUT

*** 12/14/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

34

AMOCO W.I. 1.0000, DAYS FROM SPUD 79
OPERATIONS: TD 8385 FT, PSTD 6050, SI
COSTS: DAILY WELL \$1993, CUM WELL \$749776
REMARKS: BLW 602; MIRU; TEST SEP; SIFN

*** 12/15/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 80
OPERATIONS: TD 8375 FT, PSTD 6050, FLW TST
COSTS: DAILY WELL \$2263, CUM WELL \$752039
REMARKS: BLW 220; BLWTR 382; SICP 2025; FLW 14 HR; 0 OIL; CP 850; SEP
PR 200; STATIC 6.5; DIFF 1.2; MCFD 278; PLATE 1.5; TEMP 20;
CH 8/64

*** 12/16/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 81
OPERATIONS: TD 8375 FT, PSTD 6050, FLW TST
COSTS: DAILY WELL \$6583, CUM WELL \$758622
REMARKS: BLW 17; FLW 18 HR THRU SEP; CP 192; SEP PR 69; STATIC 4;
DIFF 4.8; MCFD 265; PLATE 1; TEMP 54; CH 8/64; SHGW OF
BURNABLE GAS

*** 12/17/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 82
OPERATIONS: TD 8375 FT, PSTD 6050, TI CLEAN OUT AFTER FRAC
COSTS: DAILY WELL \$1463, CUM WELL \$760085
REMARKS: BLWTR 323; BNO 0; FLW 24 HR; 42 BW; FCP 69;
SEP 69; STATIC 4; DIFF 6; MCF 124; PLATE .625;
TEMP 50 DEG; FLW 8/64 CH

*** 12/18/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH CCST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 83
OPERATIONS: TD 8375 FT, PSTD 6050, FLW TST

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

35

COSTS: DAILY WELL \$1170, CUM WELL \$761255

REMARKS: OPEN WELL TO BLW DN; START BRINGING SN; RETURN TO 1/8 INCH CH;
BLWTR 593; BLW 9; BO 0; CP 55; SEP PR 50; STATIC 4; DIFF 5.5;
PLATE .5; TEMP 50; CH 8/64; MCFD .73

*** 12/19/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 84

OPERATIONS: TD 8375 FT, PSTD 6050, CO X N2 TO CIBP

COSTS: DAILY WELL \$2522, CUM WELL \$763777

REMARKS: 602 BLW; 314 BLWTR; BLEW WELL DN; CHANGE BLIND RAMS; PMP 15 BBL

2% KCL; TI TAG SN AT 5523 FT; RU NOWSCO; CO X FOAM N2 TO

5882 FT; CIRC CLEAN; RAN OUT N2; WAIT 2 HR ON MORE N2; PULL

11 JT: 300 FT ABOVE TOP PERF 5532 FT; SI FOR NIGHT; REC KILL

FLD

*** 12/20/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 85

OPERATIONS: TD 8375 FT, PSTD 6050, SWB

COSTS: DAILY WELL \$3400, CUM WELL \$767177

REMARKS: BLWTR 315; FIN TI FROM TOP OF PERFS 5882; CLEAN OUT SN X FOAM

N2 TO CIBP AT 6050; PULL TBG TO 5500; RUN GR TRACER SURVEY;

LAND TBG 6009 FT; SI 6 HR; SICP 340; SITP 60; OPEN WELL; WOULD

NOT FLW; SI

*** 12/21/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 86

OPERATIONS: TD 8375 FT, PSTD 6050, SWB

COSTS: DAILY WELL \$4103, CUM WELL \$771280

REMARKS: 602 BLW; 213 BLWTR; RU TO SWB; SICP 360; IFL 4300 FT; MADE 10

SWB RUNS TOTAL; REC 101 BW TOTAL; WELL KICKED OFF X FLW FOR

1.5 HR AFTER 8TH RUN-226 MCFD; MADE 2 MORE RUNS AFTER WELL

LOGGED OFF; BUT WELL WOULD NOT FLW; FFL 5000 FT; FINAL CP

290; SI OVER NIGHT

*** 12/22/85 ***

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

36

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 87

OPERATIONS: TD 8375 FT, PBTD 6050, SI FOR HOLIDAY

COSTS: CUM WELL \$771280

REMARKS: 602 BLW; 170 BLWTR; SICP 520; SITP 125; BLED TBG DN; RU TO SWB
MADE 3 SWB RUNS TOTAL; REC 43 BW TOTAL; IFL 4500 FT; FFL 5200 FT
WELL KICKED OFF X FLW FOR 6.5 HR AFTER 2ND RUN; MADE 1 MCRE RUN
X WELL FLW FOR 1.5 HR BEFORE LOGGING OFF; TOTAL FLW 8 HR;
CP 260; TPF 60; SEP 22; STATIC 2.6; DIFF 3.4; 130 MCFD;
.825 INCH PLATE; 18/64 INCH CH; 60 DEG TEMP; NO OIL; SI FOR
HOLIDAY

*** 12/23/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 88

OPERATIONS: TD 8375 FT, PBTD 6050, SI

COSTS: CUM WELL \$771280

REMARKS: 602 BLW; 170 BLWTR; SI FOR HOLIDAY

*** 12/24/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 89

OPERATIONS: TD 8375 FT, PBTD 6050, SI

COSTS: CUM WELL \$771280

REMARKS: 602 BLW; 170 BLWTR; SI FOR HOLIDAY

*** 12/25/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

AMOCO W.I. 1.0000, DAYS FROM SPUD 90

OPERATIONS: TD 8375 FT, PBTD 6050, SI

COSTS: CUM WELL \$771280

REMARKS: 602 BLW; 170 BLWTR; SI FOR HOLIDAY

*** 12/26/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

37

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 91
OPERATIONS: TD 3375 FT, PBTD 6050, SWB
COSTS: CUM WELL \$771280
REMARKS: 602 BLW; 170 BLWTR; SI FOR HOLIDAY

*** 12/27/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 92
OPERATIONS: TD 8375 FT, PBTD 6050, SWB
COSTS: DAILY WELL \$10742, CUM WELL \$782022
REMARKS: SITP 150; SICP 880; 1 SWB RUN; IFL 3500 PULLED FROM 5000;
REC 7 BLW; FLW 5.5 HR; 17 BW; 0 BO; CP 350; TP 70; SEP 65;
STATIC 3.9; DIFF 2.3; AVG MCF 192; .875 PLATE; LOGGED OFF;
3 SWB RUNS; REC 16 BLW; FFL 4000; SIFN X 350 CP

*** 12/28/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 93
OPERATIONS: TD 8375 FT, PBTD 6050, SWB
COSTS: CUM WELL \$782022
REMARKS: SI 12 HR; CP 610; TP 110; BLEW DN IFL 4500; 2 SWB RUN; FLW 3.5
HR X DIED; 2 SWB RUN; FLW 1.5 HR X DIED; 2 RUNS 1 HR APART;
FLW .75 HR X DIED; FFL 5000; SIFN; REC 39 SWB WTR; 17 FLW WTR

*** 12/29/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 94
OPERATIONS: TD 8375 FT, PBTD 6050, SI
COSTS: CUM WELL \$782022
REMARKS: SICP 500; SITP 110; IFL 4500; 3 SWB RUN; FLW 3 HR X DIED;
6 SWB RUNS 1 HR APART; FLW .75 HR EA X DIED; FFL 5000;
REC 63 BLW; SIFN; CP 250

*** 12/30/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,

DENVER

REGION *** FARMINGTON

DISTRICT *** 06/30/87 *** PAGE

38

AMOCO W.I. 1.0000, DAYS FROM SPUD 95
OPERATIONS: TD 8375 FT, PSTD 6050, SWB
COSTS: DAILY WELL \$3380, CUM WELL \$785902
REMARKS: SI

*** 12/31/85 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 96
OPERATIONS: TD 8375 FT, PSTD 6050, TAG FILL
COSTS: DAILY WELL \$1829, CUM WELL \$787731
REMARKS: BNW 26; SICP 500; SITP 75; IFL 4500; 2 SWB RUN; KICKED WELL OFF;
FLW 4.5 HR; 15 BW; 2 SWB RUN; FLW 3 HR X DIED; 2 SWB RUNS ON
1 HR INTERVAL; FLW 45 MIN EA X DIED; REC 22 BW; SIFN; FFL 5000;
FCP 275; BLW 11

*** 01/01/86 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 97
OPERATIONS: TD 8375 FT, PSTD 6050, SI
COSTS: CUM WELL \$787731
REMARKS: BNW 44; TI; CP 450; TAG FOR SN FILL; FOUND TOP OF SN 6025;
15 FT BELOW BTM PERF AT 6010 MADE 2 SWB RUNS; KICKED OFF FLW
4 HR ON 8/64 CH; WELL LOGGED OF X 300; CP; FLW 18 BNW; SI

*** 01/02/86 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, FARMINGTON 27, AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 98
OPERATIONS: TD 8375 FT, PSTD 6050, SWB
COSTS: DAILY WELL \$4748, CUM WELL \$792479
REMARKS: SI 22 HR; SICP 450; TP 150; BLW DN TBG TO 0 ON 2 HR; LIFT
NO FLUID; WELL LOGGED OF; SI

*** 01/03/86 ***

JICARILLA CONTRACT 492 NO. 1, WILDCAT, , AMOCO PRODUCTION,

FLAC 846657-01-3, API 300392379300, AUTH TD 8304, AUTH COST \$671000,
AMOCO W.I. 1.0000, DAYS FROM SPUD 99
OPERATIONS: TD 8375 FT, PSTD 6050, SI; RREL

ROBERT L. BAYLESS
Jicarilla 492 #1
Sec. 28-T28N-R2W
900' FSL & 790' FEL
Rio Arriba County, NM

MORNING REPORT

- 7-30-87 Shut in casing pressure 1610 psi (Pt. Lookout) - no tubing pressure taken. Opened well to atmosphere - well made mist of water and oil. Casing pressure was 750 psi after 30 minutes of flow and 700 psi after 1 hour of flow. Shut well in.
- 8-03-87 Move in and rig up Bayless Rig 6. Dig production pit. Blow down well. Nipple down wellhead and nipple up BOP. Trip 2-7/8" tubing out of hole. Pick up 6-1/8" bit and casing scraper. Trip in hole with tubing. Leave bit 10 stands off bottom. Shut down for night.
- 8-04-87 Finish trip in hole with bit and casing scraper. Attempt to circulate. Pumped 410 bbls water (hole capacity = 231 bbls). Slight return at flow line, less than 1". Trip tubing, bit and scraper out of hole. Unload 2-3/8" tubing onto racks. Shut down for night.
- 8-05-87 Run sandline drill. Make $\pm$ 15 runs. Recovering sand on most runs. Cannot get to bridge plug. Clean out approximately 20 ft. of formation sand. Shut down for night.
- 8-06-87 Rig up Western Company nitrogen to mist drill. Clean out sand and start drilling on bridge plug. Drill approximately 20 inches. Open bypass on bridge plug. Well came in. Let blow overnight. Used 316,900 ft³ of nitrogen to drill plug.
- 8-07-87 Well blown down partially. Tag plug. Drill on plug with well unloading. Follow plug to TD of 7500 ft. Trip out of hole with 2-7/8". Lay down 2-7/8" on float, recovered 185 jts. (5984.61 ft). Set retrievable bridge plug at 4000 ft. Pressure test casing to 2400 psi for 15 minutes. Pressure held. Shut down for night.
- 8-10-87 Rig up Basin Perforators to perforate P.C. Run #1 perf, 3550-3570' with 2 JSPF (40 shots). Run #2 perf 3508-3534 with 2 JSPF (52 holes). Pick up Baker fullbore packer and 2-3/8" tubing in hole to 3570 feet RKB. Shut down for night.
- 8-11-87 Rigged up the Western Company. Spotted 250 gallons of 7-1/2% DI HCL acid across perforation interval. Moved and set packer at 3299 ft. RKB. Broke down Pictured Cliffs perforations immediately. Established injection rate of 6.8 BPM @ 2500 psi. ISIP = 300 psi - Acidized Pictured Cliffs interval with 250 gallons of 7-1/2% DI HCL weighted acid containing 138 l.b. s.g. RCN ball sealers - 5.6 BPM @ 1700 psi. Saw 50 psi increase when balls hit perforations. Saw no ball action, no balloff -

final injection rate 5.5 BPM @ 1750 psi. Moved packer below perforations to knock off ball sealers. Blow well dry with nitrogen. Trip tubing and packer out of hole. Fracture stimulated Pictured Cliffs interval with 45,000 gallons of 70 quality foam containing 60,000 lbs. of 20-40 sand as follows:

10,000 gal of 70 quality foam pad	30 BPM @ 1300 psi
10,000 gal of 1 ppg 20-40 sand	30 BPM @ 1350 psi
25,000 gal of 2 ppg 20-40 sand	30 BPM @ 1250 psi
5,790 gal of 70 quality foam pad	30 BPM @ 1350 psi

(all water contained 2% KCL and 1/2 gal/1000 clay stabilization agent) ISIP = 1350 psi 5 min = 1300 psi 10 min = 1250 psi
 15 min = 1250 psi Average Rate - 30 BPM Average Pressure - 1300 psi
 Maximum Pressure - 1400 psi Minimum Pressure - 1200 psi
 Nitrogen pump rate - 14,150 SCF/Min Total nitrogen pumped with blowdown - 719,580 SCF Total fluid to recover - 347 bbls. Shut well in overnight.

8-12-87 Opened well to flow through 1/4" choke, annulus pressure 1100 psi (990 test). Well had 880 psi flowing pressure at 5:00 pm. Well flowing to clean up.

8-13-87 Well flowing to clean up.

8-14-87 Well flowing this morning. Killed well and tripped in hole. Tagged sand fill. Cleaned out sand fill⁵¹⁴⁷ with water and air. Released bridge plug and let well blow down. Shut down for night.

8-15-87 Pulled 6 stands of tubing. Well started flowing very hard. Bridge plug hadn't let gas escape. Let well blow down. Shut down for night.

8-16-87 Pulled remaining tubing out of hole. Found 6 joints corkscrewed and bridge plug was damaged. Tripped in hole with 2-3/8" tubing and tagged sand fill at 7506 ft. RKB (62 ft. of rathole). Moved tubing up and landed tubing as follows:

<u>DESCRIPTION</u>	<u>LENGTH</u>	<u>DEPTH</u>
KB to landing point	8.80	0-9'
243 Jts, 2-3/8", 4.7#/Ft, EUE		
Used tubing	7396.53	9-7405'
Seating Nipple	.75	7405-7406'
1 jt, 2/38" tubing	28.20	7406-7434'
	<u>7434.28</u>	

Nipple down wellhead and nipple up BOP. Shut in well. Released Rig.

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9/8/87			
Company Robert L. Bayless						Connection none			
Pool Undesignated Pictured Cliffs Undesignated Mesa Verde Undesignated Gallup						Formation Pictured Cliffs, Mesa Verde, Gallup		Unit	
Completion Date 8/16/87		Total Depth 8370		Plug Back TD 8341		Elevation 7205 GL		Farm or Lease Name JIC 492	
Csg. Size 7"	Wt. 23#	d 6.366"	Set At 8358	Perforations: From 3508 To 7440		Well No. 1			
Trq. Size 2 3/8"	Wt. 4.7#	d 2.375"	Set At 7434	Perforations: From To		Unit P	Sec. 28	Twp. 28N	Rge. 2W
Type Well - Single - Bradenhead - G.G. or G.O. Multiple G.G. Multiple						Packer Set At none		County Rio Arriba	
Producing Thru annulus		Reservoir Temp. °F 		Mean Annual Temp. °F 		Baro. Press. - P _a 12.0 (est)		State New Mexico	
L	H	G _g .65 (est.)	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps	

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.	
SI	23 days						0		1405	
1.	2" x .750"						0		672	65°
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 Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	12.3650		684	.9952	.9608	1.052	8508
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	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
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 1417 P _c ² 2,007,889					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3084$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2234$
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²		
1		688	473,287	1534602		
2						
3			(calculated)			
4						
5						

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 10,408^*$			Absolute Open Flow 10,408* Mcfd @ 15.025	Angle of Slope @ _____	Slope, n .75
---	--	--	--	------------------------	--------------

Remarks: *tubing was logged off with water - test taken through casing - tubing annulus - slight mist of fluid throughout test - test is meaningless.

Approved By Division	Conducted By: David Ball	Calculated By: Kevin McCord	Checked By:
----------------------	-----------------------------	--------------------------------	-------------

ROBERT L. BAYLESS
JICARILLA 492 #1

GALLUP PRODUCTION TEST INFORMATION

Flowing		Annulus		Orifice	Static	Differential	Gas	Separator	Water
DATE	Tubing Pressure (PSI)	Pressure (PSI)	Size (IN)	Reading	Reading	Reading	Produced (MCFPD)	Pressure (PSI)	Production (BBLS)
11/16/85	150	300	1.000	6.4	3.8		325	193	49
11/17/85	80	295	1.000	4.0	2.6		139	69	40
11/18/85	120	290	1.000	3.0	4.8		192	39	20
11/19/85	90	260	1.000	3.0	5.7		228	34	13
11/20/85	95	280	1.000	3.0	4.6		185	34	18
11/21/85	120	360	1.000	3.0	5.4		216	34	12
11/22/85	60	310	1.000	3.0	5.4		216	34	10
11/23/85	80	180	1.000	3.0	8.0		371	34	0
11/24/85	46	260	1.500	3.0	3.5		172	34	6
11/25/85	80	340	1.250	3.0	2.4		152	34	3
11/26/85	80	300	1.250	3.0	3.5		222	34	2
11/28/85	100	230	1.500	3.5	2.4		266	50	16
11/29/85	105	250	1.500	3.5	1.5		163	50	5
11/30/85	50	200	1.000	3.5	4.9		229	50	14
12/01/85	50	220	1.000	3.5	2.3		107	50	3
12/02/85	70	290	1.000	3.4	2.0		91	47	2
12/03/85	70	260	1.000	3.4	2.1		95	47	2

Tested 17 days.

Average Gallup Gas Production (last 14 days)	194 MCFGPD
Average Gallup Oil Production (last 14 days)	0 BOPD
Associated Gallup Water Production (last 14 days)	8 BWPD

ROBERT L. BAYLESS
JICARILLA 492 #1
MESA VERDE PRODUCTION TEST INFORMATION

DATE	Flowing Tubing Pressure (PSI)	Annulus Pressure (PSI)	Orifice Size (IN)	Static Reading	Differential Reading	Gas Produced (MCFPD)	Separator Pressure (PSI)	Water Production (BBLs)
12/22/85	60	260	0.825	2.6	3.4	130	22	43
12/17/85	70	350	0.875	3.9	2.3	192	65	17
12/18/85-01/03/86 - Swabbing well - Well would flow several hours then log off.								

Flow tested 2 days.

Average Mesa Verde Gas Production 161 MCFGPD
Associated Mesa Verde Water Production 30 BWPD

ROBERT L. BAYLESS

JICARILLA 491 #1

PICTURED CLIFFS PRODUCTION TEST INFORMATION

DATE	Flowing		Orifice Size (IN)	Static Reading	Differential Reading	Gas Produced (MCFPD)	Separator Pressure (PSI)	Water Production (BBLs)
	Tubing Pressure (PSI)	Annulus Pressure (PSI)						

UPPER PICTURED CLIFFS - (3452-3496)

02/14/86	320	500	0.500	5.3	6.6	164	269	121
02/15/86	280	420	0.625	5.3	3.2	124	270	51
02/16/86	290	410	0.625	5.3	3.0	116	269	39
02/17/86	290	410	0.625	5.3	3.0	116	269	31
02/18/86	290	400	0.625	5.3	2.9	112	270	23
02/19/86	290	400	0.625	5.3	2.9	112	269	23

Tested 6 days.

Average Gas Production (last 4 days)	114 MCFGPD
Associated Water Production (last 4 days)	29 BWPD

ROBERT L. BAYLESS

JICARILLA 492 #1

PROPOSED ALLOCATION FORMULA: PROPORTION OF TOTAL PRODUCTION TO EACH ZONE
AS PER AMOCO WELL TESTS.

<u>FORMATION</u>	<u>FLOW TEST PRODUCTION RATES</u>			<u>PERCENTAGE OF TOTAL FLOW</u>		
	<u>GAS</u>	<u>OIL</u>	<u>WATER</u>	<u>GAS</u>	<u>OIL</u>	<u>WATER</u>
Gallup	194	0	8	42%	100%	12%
Mesa Verde	161	0	30	34%	0%	45%
Pictured Cliffs	114	0	29	24%	0%	43%
(from Jic. 491 #1 upper P.C. test)						
TOTAL	469	0	67	100%	100%	100%

ACREAGE PLAT TIC 491 + 492

24 +	19	20	21	22	23
OPEN	<u>Pasco/Mesa</u> TIC CNT 490		<u>Amoco/Huack</u> TIC CNT 489		<u>UNION OF OILS</u> TIC CNT 488
25	30	29	28	27	26
OPEN	<u>Bayless</u>		<u>Bayless +</u> TIC CNT 491		<u>UNION OF OILS</u> TIC CNT 493
36 +	31	32	33	34	35
OPEN		+ <u>TIC CNT 491</u>			
12 + <u>MOBILE</u> TIC CNT 89	6	5	4	3	2
	OPEN	OPEN	OPEN	OPEN	OPEN