Submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. **Type of Well**
GAS

2. **Name of Operator**
MERIDIAN OIL

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. **Location of Well, Footage, Sec., T, R, M**
1520'FSL, 915'FEL, Sec.7, T-30-N, R-10-W, NMPM

5. **Lease Number**
NM-03195

6. **If Indian, All. or Tribe Name**

7. **Unit Agreement Name**

8. **Well Name & Number**
Sunray J #1A

9. **API Well No.**
30-045-23830

10. **Field and Pool**
Aztec Pictured Cliffs/
Blanco Mesaverde

11. **County and State**
San Juan Co, NM

12. **CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA**

Type of Submission	Type of Action		
___ Notice of Intent	___ Abandonment	___ Change of Plans	
	___ Recompletion	___ New Construction	
_X_ Subsequent Report	___ Plugging Back	___ Non-Routine Fracturing	
	___ Casing Repair	___ Water Shut off	
___ Final Abandonment	___ Altering Casing	___ Conversion to Injection	
	_X_ Other - Mesaverde pay add		

13. **Describe Proposed or Completed Operations**

2-11-96 MIRU. ND WH. NU BOP. TOOH w/93 jts 1 1/4" tbg. Unable to pull seal assembly. Ran free point, stuck in pkr extension @ 3007'. Chemical cut 2 3/8" tbg @ 2980'. RD. TOOH w/95 jts 2 3/8" tbg. TIH w/fishing tools.

2-12-96 Fishing.

2-13-96 Fishing. TOOH w/fish & fishing tools. TIH, ran 6 1/4" gauge ring to 2890'. TOOH. TIH w/6 1/4" csg scraper to 2990'. TOOH. TIH w/3 7/8" csg scraper to 5000'. TOOH. TIH w/CIBP, set @ 4930'. Ran CNL @ 4200-4930'. Ran CBL-CCL-GR @ 2990-4930', good bond up to log top @ 2990'. (Unable to apply pressure to log due to micro annulus because Pictured Cliffs perfs are open). TOOH. TIH w/4 1/2" pkr, set @ 3064'. PT CIBP to 3800 psi/15 min, OK. TOOH. TIH to 4897', spot 500 gal 15% Hcl. TOOH w/pkr. Perf Cliff House/Menefee w/1 JSPF @ 4428, 4451, 4467, 4483, 4493, 4500, 4513, 4524, 4538, 4555, 4588, 4593, 4620, 4632, 4678, 4697, 4716, 4749, 4764, 4771, 4786, 4822, 4830, 4890, 4901 w/25 0.29" diameter holes total.

2-14-96 Acidize w/1500 gal 15% Hcl. Frac Cliff House/Menefee w/1732 bbl 30# x-link gel, 127,300# 20/40 Arizona sd, 22,500# 20/40 Super LC sd. SI for gel break. CO after frac.

Continued on back

14. **I hereby certify that the foregoing is true and correct.**

Signed [signature] Title Regulatory Administrator Date 2/21/96

(This space for Federal or State Office use)
APPROVED BY _____ Title _____ Date _____
CONDITION OF APPROVAL, if any:

NMOCD

2-15-96 Blow well & CO.
2-16-96 (Verbal approval to commingle this well under one common lease from New Mexico Oil Conservation Division and Wayne Townsend, BLM). Blow well & CO.
2-17-96 Blow well & CO.
2-18-96 Blow well & CO. TIH w/175 jts 2 3/8" 4.7# J-55 tbg, landed @ 5456'. ND BOP. NU WH. RD. Rig released.

MERIDIAN OIL

March 4, 1996

New Mexico Oil Conservation Division
Attention: Mr. William LeMay
P.O. Box 2088
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

RE: Sunray J #1A
SE/4, Section 7, T30N, R10W
San Juan County, New Mexico
Downhole Commingling Request

Dear Mr. LeMay:

Meridian Oil Inc. is applying for administrative approval to downhole commingle the above referenced well in the Blanco Mesaverde and Aztec Pictured Cliffs intervals during the proposed workover. The zones to be commingled have common ownership. Meridian Oil operates all the acreage surrounding the referenced well. (See attached offset operator / owner plat.) We therefore wave the offset operator notice requirement and request that the NMOCD consider this application as expeditiously as possible. The Bureau of Land Management will receive notification of this proposed downhole commingling application.

This well has produced since 1981 as a dual well from the Mesaverde and Pictured Cliffs. The well is presently not a good producer due to poor producing efficiency. It had a producing capacity in 1995 of 143 mcf/d and 57 mcf/d, respectively. The commingling of the subject well will result in better producing efficiency for both intervals. A possible future artificial lift system, such as a plunger will be more efficient with the intervals commingled. Granting this application will be in the best interest of conservation, the prevention of waste, and the protection of correlative rights.

The proposed project is to fracture stimulate bypassed pay in the existing Mesaverde completion. Commingling should enhance this well's producing life and provide an economical means of recovering reserves from both zones. We plan to commingle this well during the proposed workover by pulling the Pictured Cliffs tubing and the Mesaverde tubing and packer seal assembly. The permanent packer will be extracted and a single string of tubing will be landed in the lower producing interval.

The reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed downhole commingling. The compatibility analysis of fluids from two offset wells (Sunray J #1A and Sunray J #2A) in the Pictured Cliffs and Mesaverde indicate that the fluids from each zone are compatible and no precipitates will be formed to cause damage to either reservoir. (See attachment.) Shut in pressures for the two formations are within a 50% variance. (Surface pressures for the Mesaverde and Pictured Cliffs are 303 psi and 231 psi, respectively.)

The allocation of the commingled production will be calculated using production history and flow tests obtained from the Pictured Cliffs and Mesaverde during workover operations. Meridian Oil Inc., will consult with the District Supervisor of the Aztec District Office of the Division for approval of the allocation.

Approval of this commingling application will prevent resources from being wasted and protect correlative rights. Attached with this letter are plats showing ownership of the offsetting leases for both the Mesaverde and Pictured Cliffs, a copy of the letter sent to the Bureau of Land Management, fluid compatibility analysis, a wellbore diagram, pertinent data sheet, and a workover procedure.

Sincerely,

Mary Ellen Lutey

Mary Ellen Lutey
Production Engineer

MEL:mel

Attachments

cc: Frank T. Chavez - NMOCD/Aztec
Peggy Bradfield - MOI Regulatory
Bureau of Land Management
Well File

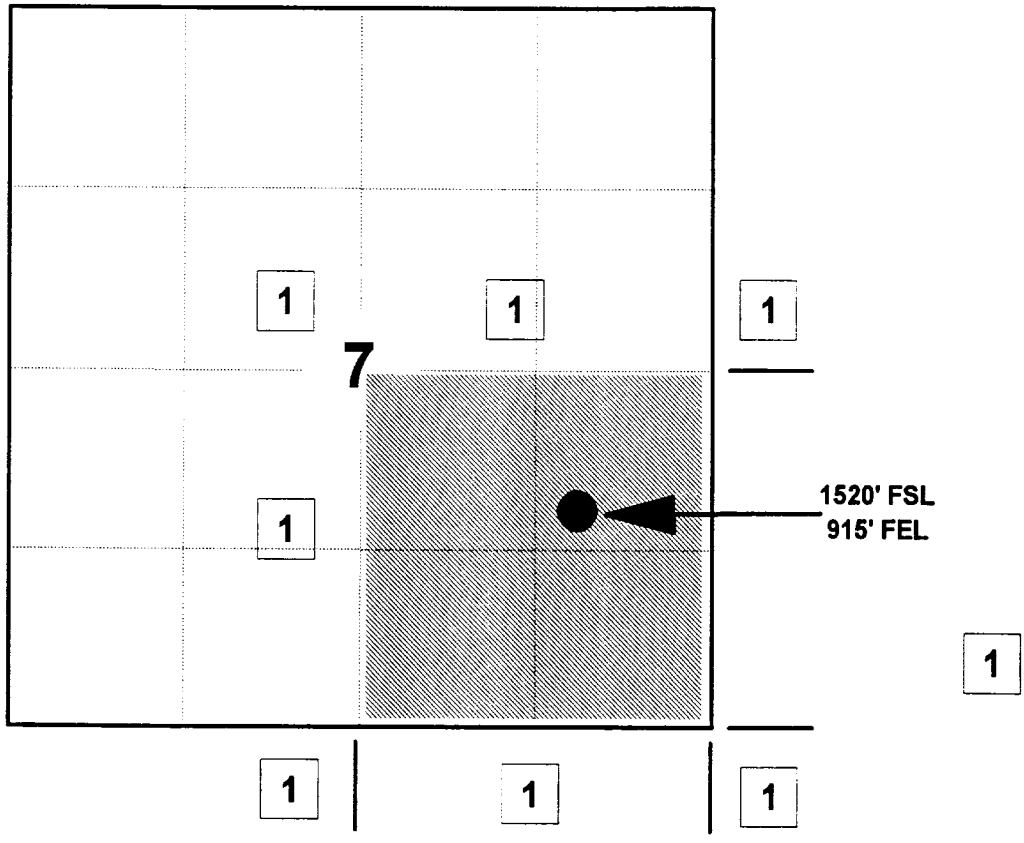
MERIDIAN OIL INC

SUNRAY J #1A

OFFSET OPERATOR \ OWNER PLAT

Pictured Cliffs / Mesaverde Formations Commingle

Township 30 North, Range 10 West



1) Meridian Oil Inc

Pictured Cliffs Formation

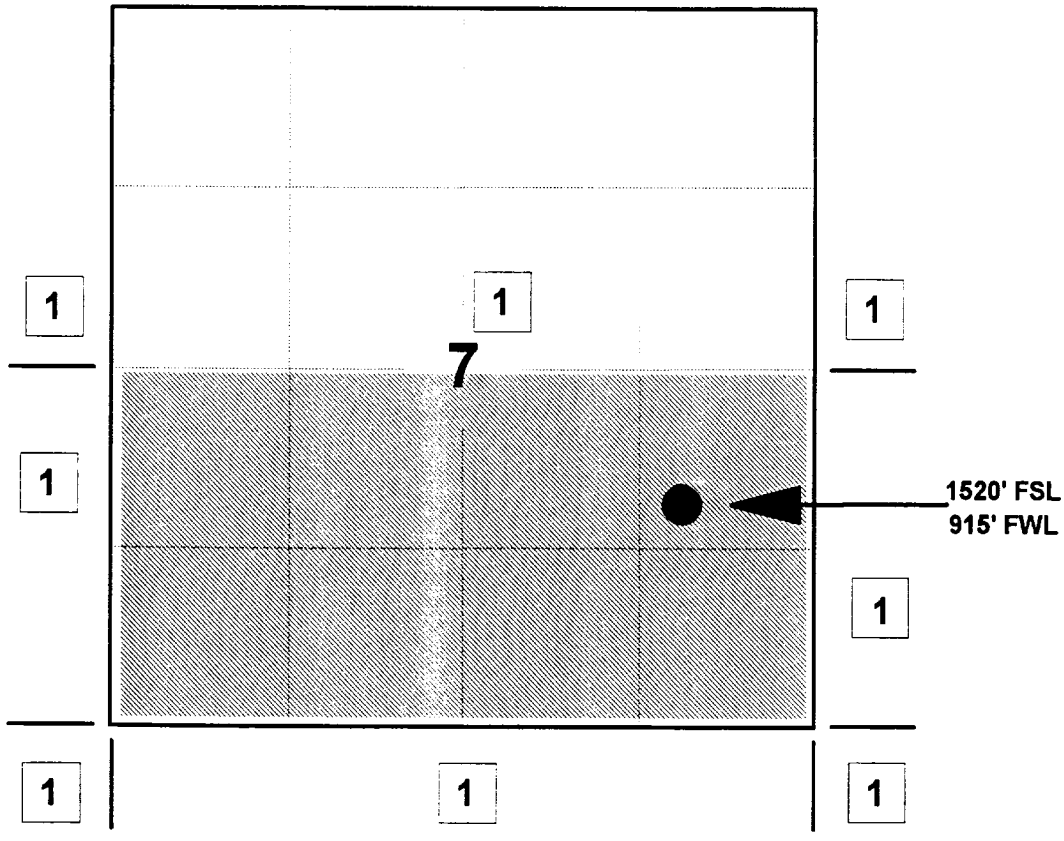
MERIDIAN OIL INC

SUNRAY J #1A

OFFSET OPERATOR \ OWNER PLAT

Pictured Cliffs / Mesaverde Formations Commingle

Township 30 North, Range 10 West



1) Meridian Oil Inc

Mesaverde Formation

MERIDIAN OIL

March 15, 1996

Bureau of Land Management
1235 La Plata Highway
Farmington, New Mexico 87401

RE: Sunray J #1A
SE/4, Section 7, T30N, R10W
San Juan County, New Mexico
Downhole Commingling Request

Gentlemen:

Meridian Oil Inc. is in the process of applying for a downhole commingling order from the New Mexico Oil Conservation Division (NMOCD) for the referenced well located in San Juan County, New Mexico. The approved application will commingle the Mesaverde and the Pictured Cliffs fields.

The purpose of this letter is to notify you of Meridian's application. If you have no objections to the NMOCD issuing a commingling order, we would appreciate your signing this letter and returning the original to Mr. LeMay at the following address with a copy to this office:

New Mexico Oil Conservation Division
Mr. William LeMay
P.O. Box 2088
Santa Fe, New Mexico 87501

Your prompt attention to this matter would be appreciated.

Sincerely,

Mary Ellen Lutey

Mary Ellen Lutey
Production Engineer

MEL:mel

The undersigned hereby waives objection to the referenced Downhole Commingle Request.

Company/Owner:_____

Title:_____

Date:_____

Meridian oil inc.
P.O. Box 4289
Farmington, NM 87499

Subject: Sun Ray comingled water tests

Four samples were received from the Sun Ray #D-1-A and D-2-A for comingled water tests to ensure no incompatabilities would exist between the water and oil from the producing zones from the Sun Ray lease.

The following samples were received,
Mesa Verde oil & water From the D-1-A (only enough water API tests)
Pictured Cliffs oil & water from the D-1-A
Pictured Cliffs oil from the D-2-A (no water)
Mesa Verde oil & water from the D-2-A

API water analysis were performed on the individual waters then mixed equally and another API water test was done on the comingled sample. Nothing on the comingled test appeared out of the ordinary. Please see the attached reports.

API oil gravities were performed on the individual oils, then a combined gravity and compatability tests were done.

D-1-A MV oil = 40*
D-2-A MV oil = 48.8*
D-2-A PC oil = 55.2*
A combined gravity of 47.4* was noted

The oils were combined and mixed at high speed then allowed to sit static to see if any incompatabilities could be noticed. The oils mixed well with no visable precipatations or emulsions.

The oils were also combined with formation waters and mixed at high speed to see if any emulsions could be generated. These results showed the oils breaking out clean with no interfaceing or emulsions.

CONCLUSION

Based on the tests performed on the oil & waters in question, no precipatants, emulsionsor other undesireable reactions occoured that could otherwise have damaging effects from the comingling of these fluids.

BJ SERVICES

API W A T E R A N A L Y S I S

Company:	MERIDIAN OIL INC.	W.C.N.A. Sample No.:	
Field:		Legal Description:	
Well:	SUNRAY D-2-A	Lease or Unit:	
Depth:		Water.B/D:	
Formation:	PC	Sampling Point:	
State:	NM	Sampled By:	MOI
County:	SAN JUAN	Date Sampled:	03/11/96

Type of Water(Produced,Supply, ect.): PROD.

PROPERTIES

pH:	5.56	Iron, Fe(total):	3
Specific Gravity:	1.004	Sulfide as H2S:	0
Resistivity (ohm-meter):	10.00	Total Hardness:	
Tempature:	78F	(see below)	

D I S S O L V E D SOLIDS

CATIONS	mg/l		me/l			
Sodium, Na:	184	:	8			
Calcium, Ca:	12	:	1	Sample(ml): 10.0 ml of EDTA:		.30
Magnesium, Mg:	2	:	0	Sample(ml): 10.0 ml of EDTA:		.10
Barium, Ba:	N/A	:	N/A			
Potassium, K:	16	:	0			

ANIONS	mg/l		me/l			
N: .500 Chloride, Cl:	177	:	5	Sample(ml): 10.0 ml of AgNO3:		.10
Sulfate, SO4:	80	:	2			
Carbonate, CO3:		:		Sample(ml): 1.0 ml of H2SO4:		
Bicarbonate, HCO3:	122	:	2	Sample(ml): 25.0 ml of H2SO4:		.50

Total Dissolved Solids (calculated):	593		
Total Hardness:	40	Sample(ml): 10.0 ml of EDTA:	.40

REMARKS AND RECOMMENDATIONS:

BJ SERVICES

API W A T E R A N A L Y S I S

Company:	MERIDIAN OIL INC.	W.C.N.A. Sample No.:	
Field:		Legal Description:	
Well:	SUNRAY D-1-A	Lease or Unit:	
Depth:		Water.B/D:	
Formation:	PC	Sampling Point:	
State:	NM	Sampled By:	MOI
County:	SAN JUAN	Date Sampled:	03/11/96

Type of Water(Produced,Supply, ect.): PROD.

PROPERTIES

pH:	7.50	Iron, Fe(total):	1
Specific Gravity:	1.010	Sulfide as H2S:	0
Resistivity (ohm-meter):	.76	Total Hardness:	
Tempature:	78F	(see below)	

D I S S O L V E D SOLIDS

CATIONS	mg/l		me/l		
Sodium, Na:	2323	:	101		
Calcium, Ca:	40	:	2	Sample(ml): 10.0 ml of EDTA:	1.00
Magnesium, Mg:	2	:	0	Sample(ml): 10.0 ml of EDTA:	.10
Barium, Ba:	N/A	:	N/A		
Potassium, K:	410	:	11		

ANIONS	mg/l		me/l		
N: .500 Chloride, Cl:	3722	:	105	Sample(ml): 10.0 ml of AgNO3:	2.10
Sulfate, SO4:	30	:	1		
Carbonate, CO3:		:		Sample(ml): 1.0 ml of H2SO4:	
Bicarbonate, HCO3:	488	:	8	Sample(ml): 25.0 ml of H2SO4:	2.00

Total Dissolved Solids (calculated):	7015		
Total Hardness:	100	Sample(ml): 10.0 ml of EDTA:	1.00

REMARKS AND RECOMMENDATIONS:

BJ SERVICES

API W A T E R A N A L Y S I S

Company:	MERIDIAN OIL INC.	W.C.N.A. Sample No.:	
Field:		Legal Description:	
Well:	SUNRAY D-2-A	Lease or Unit:	
Depth:		Water.B/D:	
Formation:	MV	Sampling Point:	
State:	NM	Sampled By:	MOI
County:	SAN JUAN	Date Sampled:	03/11/96
		Type of Water(Produced,Supply, ect.):	PROD.

PROPERTIES

pH:	5.87	Iron, Fe(total):	3
Specific Gravity:	1.005	Sulfide as H2S:	0
Resistivity (ohm-meter):	10.00	Total Hardness:	
Tempature:	78F	(see below)	

D I S S O L V E D SOLIDS

CATIONS	mg/l		me/l		
Sodium, Na:	184	:	8		
Calcium, Ca:	4	:	0	Sample(ml): 10.0 ml of EDTA:	.10
Magnesium, Mg:	2	:	0	Sample(ml): 10.0 ml of EDTA:	.10
Barium, Ba:	N/A	:	N/A		
Potassium, K:	6	:	0		

ANIONS	mg/l		me/l		
N: .500 Chloride, Cl:	177	:	5	Sample(ml): 10.0 ml of AgNO3:	.10
Sulfate, SO4:	30	:	1		
Carbonate, CO3:		:		Sample(ml): 1.0 ml of H2SO4:	
Bicarbonate, HCO3:	122	:	2	Sample(ml): 25.0 ml of H2SO4:	.50

Total Dissolved Solids (calculated):	525		
Total Hardness:	20	Sample(ml): 10.0 ml of EDTA:	.20

REMARKS AND RECOMMENDATIONS:

BJ SERVICES

API W A T E R A N A L Y S I S

Company:	MERIDIAN OIL INC.	W.C.N.A. Sample No.:	
Field:		Legal Description:	
Well:	SUNRAY COMINGLED WATERS	Lease or Unit:	
Depth:		Water.B/D:	
Formation:	MV/PC	Sampling Point:	
State:	NM	Sampled By:	MOI
County:	SAN JUAN	Date Sampled:	03/11/96
		Type of Water(Produced,Supply, ect.):	PROD.

PROPERTIES

pH:	7.63	Iron, Fe(total):	0
Specific Gravity:	1.005	Sulfide as H2S:	0
Resistivity (ohm-meter):	1.50	Total Hardness:	
Tempature:	78F	(see below)	

D I S S O L V E D SOLIDS

CATIONS	mg/l		me/l		
Sodium, Na:	1380	:	60		
Calcium, Ca:	24	:	1	Sample(ml): 10.0 ml of EDTA:	.60
Magnesium, Mg:	2	:	0	Sample(ml): 10.0 ml of EDTA:	.10
Barium, Ba:	N/A	:	N/A		
Potassium, K:	230	:	6		

ANIONS	mg/l		me/l		
N: .500 Chloride, Cl:	2127	:	60	Sample(ml): 10.0 ml of AgNO3:	1.20
Sulfate, SO4:	30	:	1		
Carbonate, CO3:		:		Sample(ml): 1.0 ml of H2SO4:	
Bicarbonate, HCO3:	342	:	6	Sample(ml): 25.0 ml of H2SO4:	1.40

Total Dissolved Solids (calculated):	4135		
Total Hardness:	70	Sample(ml): 10.0 ml of EDTA:	.70

REMARKS AND RECOMMENDATIONS:

Analysis No. _____
Date _____

The Western Company

Oil Analysis

Operator MERIDIAN OIL INC
Well SunRay D-2-A
Field _____
Formation Pictured Cliffs
Depth _____
County San Juan
State NM

Date Sampled _____
Date Received 3-12-96
Submitted By MOI
Worked By D. Shepherd
Sample Description _____

API Gravity 55 ° at 60°F
*Paraffin Content _____ % by weight
*Asphaltene Content _____ % by weight
Pour Point _____ °F
Cloud Point _____ °F

Comments: Oil is clear Condensate

Analyst _____

*Report calculations and data on back.

Analysis No. _____
Date _____

The Western Company

Oil Analysis

Operator MERIDIAN OIL INC
Well SUNRAY D-2-A
Field _____
Formation Mesa Verde
Depth _____
County San Juan
State NM

Date Sampled _____
Date Received 3-12-96
Submitted By MOI
Worked By D. Shepherd
Sample Description _____

API Gravity 48.4 ° at 60°F
*Paraffin Content _____ % by weight
*Asphaltene Content _____ % by weight
Pour Point _____ °F
Cloud Point _____ °F

Comments: Oil is Clear to light Green with a Solids And Emulsion Phase.

Analyst _____

*Report calculations and data on back.

Analysis No. _____
Date _____

The Western Company

Oil Analysis

Operator MERIDIAN OIL INC. Date Sampled _____

Well Sun Ray D-1-A Date Received 3-12-96

Field _____ Submitted By MOI

Formation MESA VERDE Worked By D. Shepherd

Depth _____ Sample Description _____

County San Juan _____

State NM _____

API Gravity 40.0 ° at 60°F

*Paraffin Content _____ % by weight

*Asphaltene Content _____ % by weight

Pour Point _____ °F

Cloud Point _____ °F

Comments: oil is Amber Colored. Emulsified with Solids. AND Parrafin

Analyst _____

*Report calculations and data on back.

Analysis No. _____
Date _____

The Western Company

Oil Analysis

Operator MERIDIAN OIL INC
Well SUNRay Mixed oils
Field _____
Formation PC/MV.
Depth _____
County _____
State _____

Date Sampled _____
Date Received 3-12-96
Submitted By _____
Worked By D. Shepherd
Sample Description _____
Combined D-1-A + D-2-A
Oil Samples

API Gravity 47.4 ° at 60°F
*Paraffin Content _____ % by weight
*Asphaltene Content _____ % by weight
Pour Point _____ °F
Cloud Point _____ °F

Comments:

Analyst _____

*Report calculations and data on back.

j STATE OF NEW MEXICO
ENERGY and MINERALS
DEPARTMENT
This form is not to be used for reporting packer leakage tests in Southeast New Mexico

OIL CONSERVATION DIVISION

Revised 10/01/78

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator MERIDIAN OIL, INC Lease SUNRAY J Well No. 1A

Location of Well: Unit I Sect 7 Twp. 30N Rge. 10W County SAN JUAN

	NAME OF RESERVOIR OR POOL	TYPE OF PROD. (Oil or Gas)	METHOD OF PROD. (Flow or Art. Lift)	PROD. MEDIUM (Tbg. or Csg.)
Upper Completion	PICTURED CLIFFS	GAS	FLOW	TBG
Lower Completion	MESAVERDE	GAS	FLOW	CSG

PRE-FLOW SHUT-IN PRESSURE DATA

	Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Upper Completion	8/4/95	7 dAYS	231	
Lower Completion	8/4/95	5 DAYS	303	

FLOW TEST NO. 1

Commenced at (hour,date)* 9-Aug-95 Zone producing (Upper or Lower) LOWER

TIME (hour,date)	LAPSED TIME SINCE*	PRESSURE		PROD. ZONE TEMP	REMARKS
		Upper Completion	Lower Completion		
8-Jul		229	301		
8-Jul		230	303		
9-Jul		231	303		
10-Jul		235	252		
11-Jul		237	251		

Production rate during test

Oil: _____ BOPD based on _____ Bbls. in _____ Hours. _____ Grav. _____ GOR _____

Gas: _____ MCFPD; Tested thru (Orifice or Meter): _____

MID-TEST SHUT-IN PRESSURE DATA

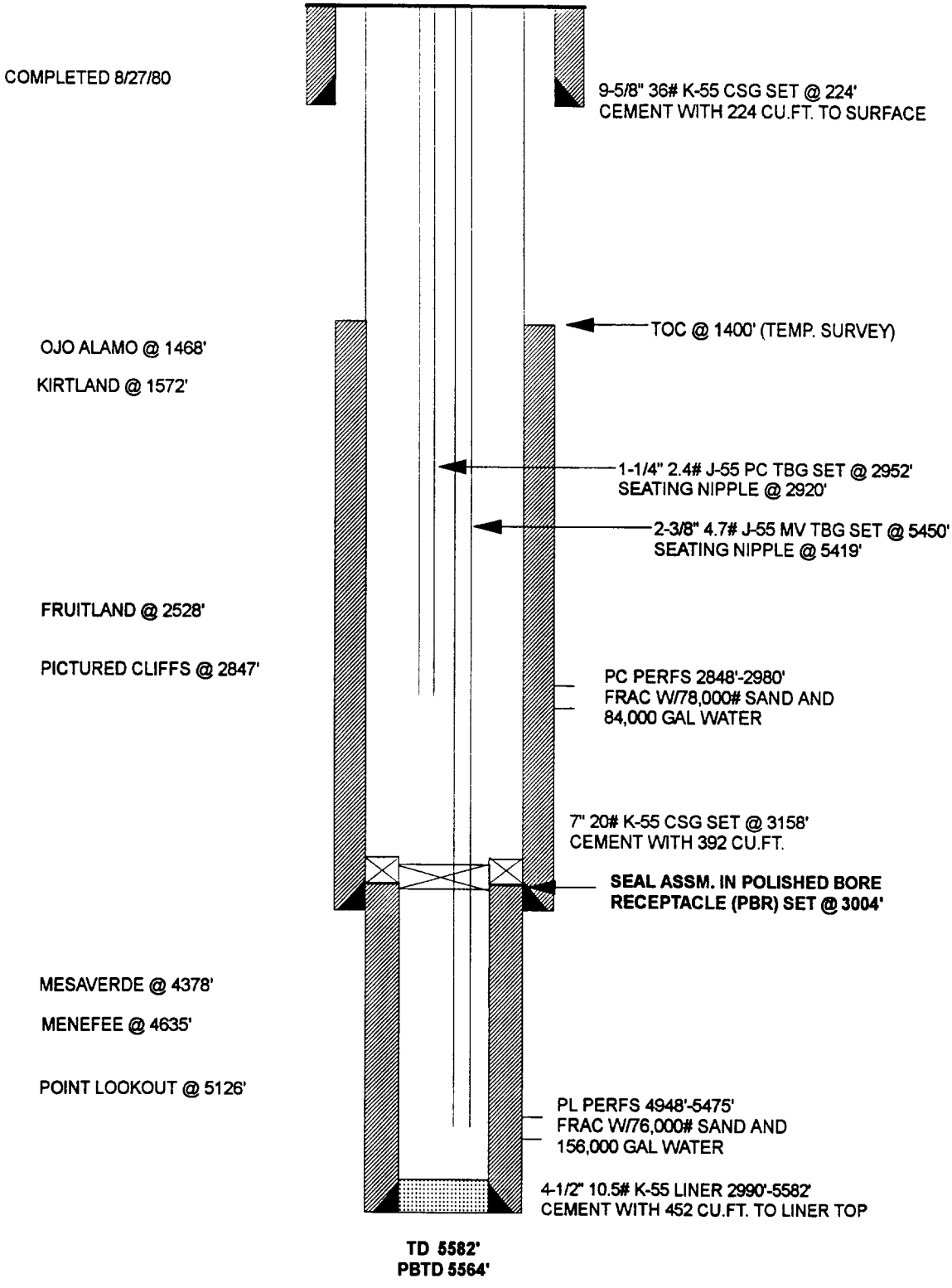
	Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Upper Completion				
Lower Completion				

(Continue on reverse side)

SUNRAY J #1A

AS OF 7/12/95

BLANCO MESAVERDE/PICTURED CLIFFS
UNIT I, SEC 7, T30N, R10W, SAN JUAN COUNTY, NM



ENGINEERING-LMG

Pertinent Data Sheet - Sunray J #1A

Location: SE/4 1550' FSL, 915' FEL, Unit I, Section 7, T30N, R10W,
Lat. 36.822845, Long. 107.918335 by TDG
San Juan County, New Mexico

Field: Blanco Mesaverde, Aztec Pictured Cliffs **Elevation:** 6273' KB **TD:** 5582'
COTD: 5564'

Completed: 08-27-80 **Spud Date:** 02-26-80

DP No: 53623A/53623B **Prop. No:** 072256900 **Fed. No:** NM 03195

Casing/Liner Record:

Csg Size	Wt. & Grade	Depth Set	Cement	Top/Cement
9 5/8"	36# K-55	224'	224 cu. ft.	to surface
7"	20# K-55	3158'	392 cu. ft.	1400' (TS)
4 ½" Liner	10.5# K-55	2990'-5582'	452 cu. ft.	Liner Top

Tubing Record: MV-177 joints of 2 3/8" 4.7# tubing set at 5450'. Seating Nipple @ 5419'. Seal assembly in Polished Bore Receptacle (PBR) set @ 3004'. PC-93 joints of 1¼" tubing set at 2952'. Seating nipple at 2920'.

Formation Tops:

Ojo Alamo:	1468'	Mesaverde:	4378'
Kirtland:	1572'	Menefee:	4635'
Fruitland:	2528'	Point Lookout:	5126'
Pictured Cliffs:	2847'		

Logging Record: I/SFL, FDC, ISF, Temp. Survey

Stimulation: Sand water fractured Point Lookout intervals between 4948' and 5475' with 156,000 gallons of water and 76,000# of sand.

Sand water fractured Pictured Cliffs intervals between 2848' and 2980' with 84,000 gallons of water and 78,000# of sand.

Workover History:

None

Sunray J #1A - Mesaverde
Cliffhouse and Menefee Payadd
Lat-Long by TDG: 36.822845 - 107.918335
SE/4 Section 7, T30N-R10W
August 31, 1995

1. Hold safety meeting. MIRU. Comply with all MOI, BLM and NMOCD rules and regulations. Install 13 frac tanks and 1x400 bbl rig tank. Fill each frac tank with 5#'s of biocide and filtered (25 micron) 1% KCl water.

2. Obtain and record all wellhead pressures. ND WH, NU BOP. TOOH w/ 1-1/4" tubing set @ 2652'. TOOH w/ 2-3/8" tubing set at 5450' and seal assembly. Replace bad tubing as necessary.

3. PU 7" (20#) casing scraper, TIH and run casing scraper to 2990'. TOOH.

4. TIH with 2-3/8" tubing and 3-3/4" bit. CO to PBTD of 5564'. TOOH.

5. TIH w/ 4-1/2" CIBP and set CIBP @ 4930'. Load hole w/ 1% KCL water if possible. Spot Menefee interval (± 4900' - ± 4700') w/ 135 gallons of inhibited 15% HCL acid. TOOH.

6. RU wireline and run CBL-GR-CCL from ± 4930' to TOC in 4-1/2" casing (run CBL to find TOC in liner). Run CNL from 4930' to 4200'. Send copy of logs to engineering and perforation intervals will be provided.

7. Perforate the Menefee interval (± 4700' - ± 4900') top down using 3-1/8" HSC guns with 12 gram charges and 0.31" diameter holes. (Intervals will be provided after reviewing logs.) Inspect guns to ensure all perforations fired. RD wireline.

8. TIH w/ 4-1/2" fullbore packer, ± 200' of 2-3/8" tubing and 2-7/8" N-80 frac string. Set packer @ ± 4915'. Load hole w/ water and pressure test casing and CIBP to 3800 psi. Release packer, PUH to ± 150' above top perforation and reset packer. Monitor the backside during balloff throughout the job.

9. **Maximum allowable treating pressure is 3800 psi during acid job.** Pump 1500 gallons of 15% HCL acid @ 8 Bls/min dropping 7/8" diameter RCN ball sealers spaced evenly throughout the job (2 balls per perforation hole). Release packer, TIH and knock balls off. TOOH to ± 3100' and reset packer.

10. Hold safety meeting. Monitor the backside during stimulation. **Maximum allowable surface treating pressure is 6000 psi @ 25 Bbls/min.** If rate is reduced, the maximum pressure will be lower. (See stimulation schedule for maximum pressures for various rates.)

11. Pressure test surface lines to 7000 psi. (1000 psi over maximum treating pressure but less than the working pressure of the lines.) Fracture stimulate the Menefee interval @ 30 BPM using 30# linear gel and 80m lbs of sand tagged w/ Irridium. (Final stimulation procedure will be attached after reviewing logs.) Do not over displace during flush. Shut in well immediately after completion of the stimulation until pressure falls to zero.

12. Release packer and TOOH standing back frac string. Check and inspect packer. RU wireline and set a 4-1/2" RBP @ ± 4675'. Dump sand on top of RBP w/ dump bailer.

13. Perforate Cliffhouse interval (± 4640' - ± 4320') top down using 3-1/8" HSC guns with 12 gram charges and 0.31" diameter holes. (Perforation interval will be provided after reviewing logs.) Inspect guns to ensure all perforations fired. RD wireline.

Sunray J #1A
Mesaverde Payadd
August 31, 1995

14. TIH w/ 4-1/2" fullbore packer, ± 200' of 2-3/8" tubing and 2-7/8" N-80 frac string. Set packer @ ± 4650'. Load hole w/ water and pressure test RBP to 3800 psi. Release packer, PUH to ± 150' above top perforation and reset packer. Monitor the backside during balloff throughout the job.

15. **Maximum allowable treating pressure is 3800 psi during acid job.** Pump 1500 gallons of 15% HCL acid @ 8 Bls/min dropping 7/8" diameter RCN ball sealers spaced evenly throughout the job (2 balls per perforation hole). Release packer, TIH and knock balls off. TOOH to 3100' and reset packer.

16. Hold safety meeting. Monitor the backside during stimulation. **Maximum allowable surface treating pressure is 6000 psi @ 25 Bbls/min.** If rate is reduced, the maximum pressure will be lower. (See stimulation schedule for maximum pressures for various rates.)

17. Pressure test surface lines to 7000 psi. (1000 psi over maximum treating pressure but less than the working pressure of the lines.) Fracture stimulate the Cliffhouse interval @ 30 BPM using 30# linear gel and 105m lbs of sand tagged w/ Irridium. (Final stimulation procedure will be attached after reviewing logs.) Do not over displace during flush. Shut in well immediately after completion of the stimulation until pressure falls to zero.

18. Release packer and TOOH laying down frac string.

19. TIH w/ retrieving head and CO to RBP @ ± 4675' until sand production is minimal. Obtain pitot gauge for Cliffhouse interval. Release RBP @ 4675' and TOOH.

20. TIH w/ 3-3/4" bit and drill up CIBP set @ 4930'. CO to PBTD (5564'). PU above the Mesaverde perforations and flow the well naturally, making short trips for clean up when necessary. Obtain pitot gauge for Mesaverde after clean up.

21. When sand has diminished, TOOH.

22. RU wireline company. Run After Frac GR from 5000' to top of tracer activity.

23. TIH with one joint of 2-3/8", 4.7#, J-55 tubing w/ expendable check, an F-nipple, then approximately 2440' of tubing, model G locator seal assembly and then the remaining 2-3/8" production tubing. Land tubing near bottom perforation (5475').

24. TIH w/ on joint of 1-1/4" tubing w/ expendable check, an F-nipple, then the remaining 1-1/4" tubing. Land tubing @ 2652'

25. ND BOP's, NU WH. Pump off expendable checks. Obtain final pitot. RD and MOL. Return well to production.