5/22/96
DHC-1244

MERIDIAN OIL

OIL CONSERVATION DIVISION
RECEIVED

96 MAR 6 AM 8 52

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: San Juan 10
SW/4, Section 10, 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 1970 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 66 mcf/d and 46 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 sidetrack and recomplete in the Mesaverde formation. Commingling of the Mesaverde and Pictured Cliffs 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 after sidetrack operations.

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 196 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

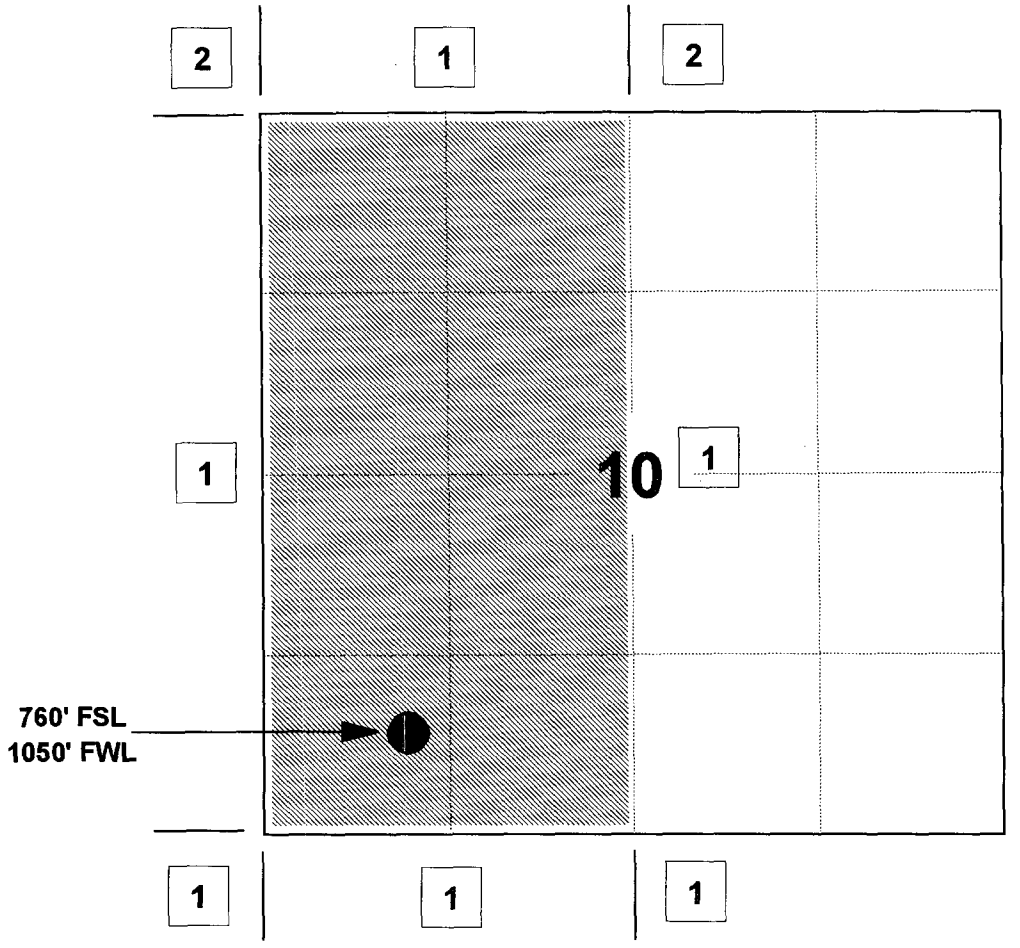
MERIDIAN OIL INC

SAN JUAN #10

OFFSET OPERATOR \ OWNER PLAT

Mesaverde / Pictured Cliffs Formations Commingle Well

Township 30 North, Range 10 West



1) Meridian Oil Inc

2) Amoco Production Company PO Box 800, Denver, CO 80201

Mesavede Formation

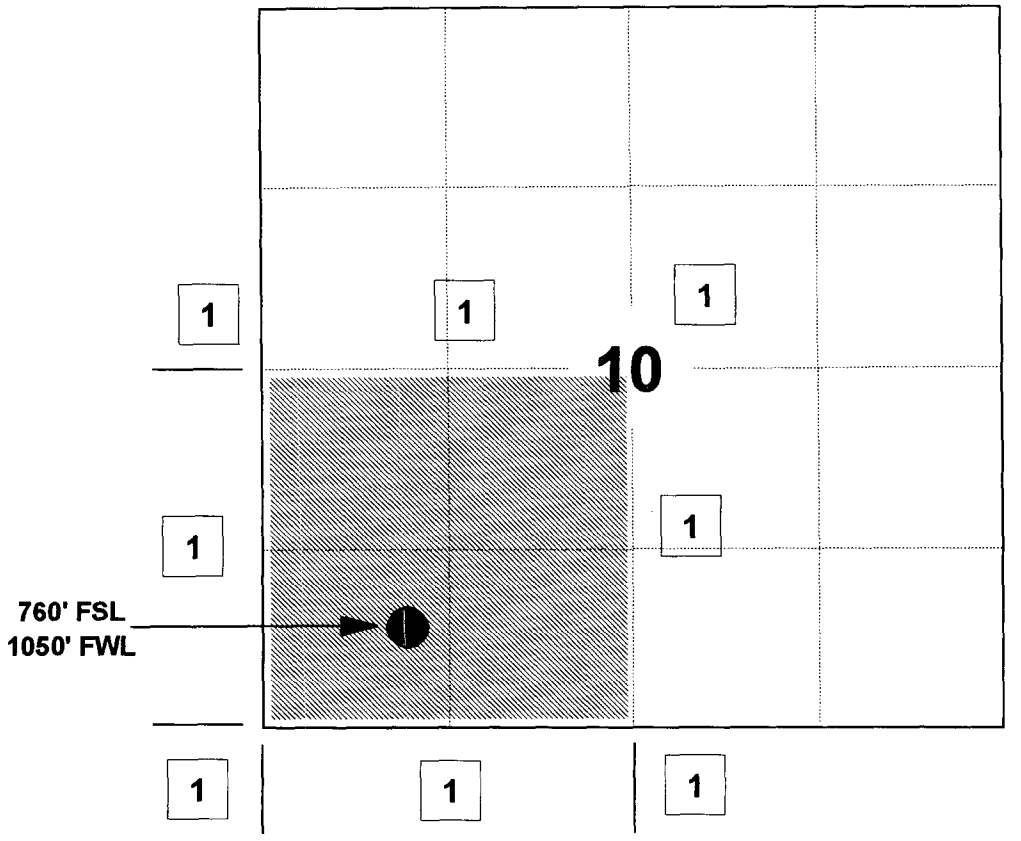
MERIDIAN OIL INC

SAN JUAN #10

OFFSET OPERATOR \ OWNER PLAT

Mesaverde / Pictured Cliffs Formations Commingle Well

Township 30 North, Range 10 West



1) Meridian Oil Inc

Pictured Cliffs Formation

MERIDIAN OIL

March 4, 1996

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

RE: San Juan 10
SW/4, Section 10, 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 49.4 ° 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 DS

*Report calculations and data on back.

Analysis No. _____
Date _____

The Western Company

Oil Analysis

Operator MERIDIAN OIL INC. Date Sampled _____

Well SunRay 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. ° 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. Date Sampled _____

Well SUNRay Mixed oils Date Received 3-12-96

Field _____ Submitted By _____

Formation PC/MV. Worked By D. Shepherd

Depth _____ Sample Description _____

County _____ Combined D-1-A + D-2-A

State _____ Oil Samples

API Gravity 47.4 ° at 60°F

*Paraffin Content _____ % by weight

*Asphaltene Content _____ % by weight

Pour Point _____ °F

Cloud Point _____ °F

Comments:

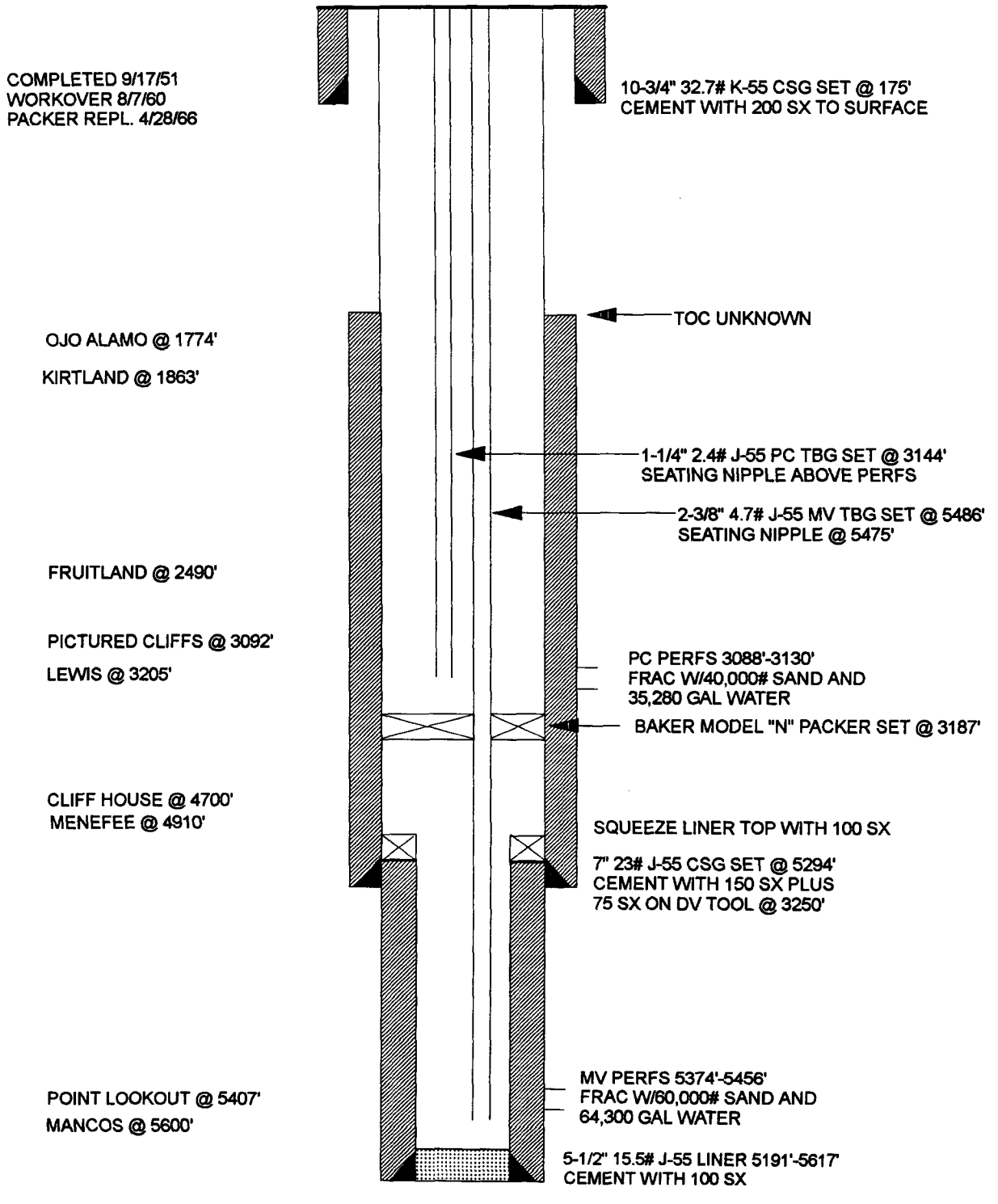
Analyst _____

*Report calculations and data on back.

SAN JUAN #10

AS OF 7/12/95

BLANCO MESAVERDE/PICTURED CLIFFS
UNIT M, SEC 10, T30N, R10W, SAN JUAN COUNTY, NM



ENGINEERING-LMG

Pertinent Data Sheet - San Juan #10

Location: SW/4 760' FSL, 1050' FWL, Unit M, Section 10, T30N, R10W
Lat. 36.822296, Long. 107.876602 by TDG
San Juan County, New Mexico

Field: Blanco Mesaverde, Blanco Pictured Cliffs **Elevation:** 6481' KB **TD:** 5614'
COTD: 5614'

Completed: 09-17-51 **Spud Date:** 06-28-51

DP No: 53304A/53304B **Prop. No:** 012599600 **Fed. No:** NM 03202

Casing/Liner Record:

Csg Size	Wt. & Grade	Depth Set	Cement	Top/Cement
10 ¾"	32.7# K-55	175'	200 sxs	to surface
7"	23# J-55	5294'	150 sxs	TOC unknown
			75 sxs on DV Tool @ 3250'	TOC unknown
5 ½" Liner	15.5# J-55	5191'-5617'	100 sxs	Liner Top

Tubing Record: MV- 2 3/8" 4.7# J-55 tubing set at 5486'. Seating Nipple @ 5475'. Baker Model "N" Packer set @ 3187'. PC- 1¼" 2.4# J-55 tubing set at 3144'. Seating Nipple above perfs.

Formation Tops:

Ojo Alamo:	1774'	Cliff House:	4700'
Kirtland:	1863'	Menefee:	4910'
Fruitland:	2490'	Point Lookout:	5407'
Pictured Cliffs:	3092'	Mancos:	5600'
Lewis:	3205'		

Logging Record: I-ES, Temp. Survey

Stimulation: Sand water fractured Mesaverde intervals between 5374' and 5456' with 64,300 gallons of water and 60,000# of sand.

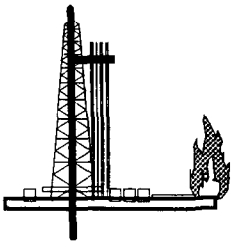
Sand water fractured Pictured Cliffs intervals between 3088' and 3130' with 35,280 gallons of water and 40,000# of sand.

Workover History:

08-07-60: Liner added, cemented with 100 sxs. Liner Top squeezed with 100 sxs. Perfed Mesaverde from 5374' - 5456', fractured with 64,300 gallons of water and 60,000# of sand; Pictured Cliffs perfed from 3088' - 3130', fractured with 32,800 gallons of water and 40,000# of sand.

04-28-66: Replaced packer.

MERIDIAN OIL



CAPITAL WORKOVER WELL PROGRAM
FARMINGTON REGION

San Juan #10
Mesa Verde Sidetrack
760' FSL, 1050' FWL
Section 10, T-30-N, R-10-W
San Juan County, New Mexico

Area Team 4&5
1996 Discretionary Budget

Special Considerations: **Casing and Cement Design Revisions.**

Prepared: _____
Kurt A. Shipley
Drilling Engineer II

Approved: _____
Drilling Superintendent

Meridian Oil Operational Policies:

No Smoking within 150' of any major fuel source, designated smoking areas provided.
Protective clothing must be worn at all times.
Report any unsafe conditions or activities to the rig supervisor immediately.
Any accident regardless of severity should be reported to rig supervisor immediately.
Notify rig supervisor immediately if abnormal conditions are encountered (kicks, lost circulation, tight hole, or unstable hole conditions).
All contractors must comply with all local, state, federal, and tribal rules and regulations.

Attachments: Material / Service Requisition, Maps to Location, Cement Notification Form,

Distribution: K.A. Shipley, P.W. Bent, W.S. Smithwick, J.C. Angvick, F.W. Seidel, BJ Services
Well File (original), Purchasing and Materials (Materials Requisition only)
Rig Supervisor's File (2 Copies)

MERIDIAN OIL

General Well Data

Well Name:	**San Juan #10**	Prepared:	1/29/96	
Objective:	Mesa Verde Sidetrack	Revised:		
Location (Footage):	760' FSL, 1050' FWL	Sundry/BLM:	8/23/95	
Section, Township, Range:	Section 10, T-30-N, R-10-W	Sundry/NM:	N/A	
Field:	Blanco Mesa Verde	NSL/NM:	N/A	
County:	San Juan County	WSR:	10/3/95	
State:	New Mexico	AFE #:	1Q73	
Authorized TD:	5850'	Authorized Cost	$406,108	Workover
Rig:	Aztec #266 / Drake #17	Estimated Days:	13	

Casing and Cement Program

Type	Interval	Hole Size	Casing Size	Casing Weight	Casing Type	Threads	Burst PSI	Collapse PSI
Gas Drilled	0'-5850'	6-1/4"	4-1/2"	10.50#	K-55	ST&C	4790	4010
Mist Drilled	0'-5950'	6-1/4"	4-1/2"	10.50#	K-55	ST&C	4790	4010

Float Equipment

Production Casing — Run in order listed below:

Gas Drilled Hole (0' - 5850')

4-1/2"	Float shoe.	
4-1/2"	40' shoe joint above guide shoe.	
4-1/2"	Insert float collar.	
4-1/2"	2279' of 10.50#, K-55, STC casing.	Optimum Makeup torque: 1500 ft-lb.
4-1/2"	Baker Safety Joint at 3530'.	Optimum Makeup torque: 1200 ft-lb. (pre-set)
4-1/2"	3530' of 10.50#, K-55, STC casing to surface.	Optimum Makeup torque: 1500 ft-lb.

Mist Drilled Hole (0' - 5950')

4-1/2"	Float shoe.	
4-1/2"	40' shoe joint above guide shoe.	
4-1/2"	Insert float collar.	
4-1/2"	2379' of 10.50#, K-55, STC casing.	Optimum Makeup torque: 1500 ft-lb.
4-1/2"	Baker Safety Joint at 3530'.	Optimum Makeup torque: 1200 ft-lb. (pre-set)
4-1/2"	3530' of 10.50#, K-55, STC casing to surface.	Optimum Makeup torque: 1500 ft-lb.

No centralizers run in gas drilled hole.

Cementing

Production String of Casing Cement Job

Gas Drilled Hole (0' - 5850')

Lead - No Tail

Cement:	50/50 Class B Pozmix w/ 2% gel, 0.5% FL-62, 1/4 pps Cellophane, 3 pps Gilsonite.		
Sacks:	200 sacks	Excess Cement:	50 %
Volume:	249.0 cu. ft.	Calculated Gauge Hole Volume:	166.0 cu. ft.
Density:	13.5 ppg	Total Volume Pumped:	249.0 cu. ft.
Yield:	1.24 cu. ft. / sack		
Mix Water:	5.27 gal / sack	Cap. between 4-1/2" csg & 7", 23.0# csg:	0.1106 cu. ft/ft
		Cap. between 4-1/2" csg & 6-1/4" hole:	0.1026 cu. ft/ft
Displacement:	92.3 bbls	Capactiy of 4-1/2", 10.50# csg:	0.0159 bbls/ft

Additional Data

Pictured Cliffs Perforations:	3088'-3130'
Baker Safety Joint:	3530'
Estimated TOC inside 7", 23.0# casing (assuming no loss):	3496'
Estimated TOC inside 7", 23.0# casing (actual):	4247'
Kick-Off Point:	4447'
Total Depth:	5850'

Mist Drilled Hole (0' - 5950')

Lead - No Tail

Cement:	50/50 Class B Pozmix w/ 2% gel, 0.5% FL-62, 1/4 pps Cellophane, 3 pps Gilsonite.		
Sacks:	234 sacks	Excess Cement:	65 %
Volume:	290.9 cu. ft.	Calculated Gauge Hole Volume:	176.3 cu. ft.
Density:	13.5 ppg	Total Volume Pumped:	290.9 cu. ft.
Yield:	1.24 cu. ft. / sack		
Mix Water:	5.27 gal / sack	Cap. between 4-1/2" csg & 7", 23.0# csg:	0.1106 cu. ft/ft
		Cap. between 4-1/2" csg & 6-1/4" hole:	0.1026 cu. ft/ft
Displacement:	93.9 bbls	Capactiy of 4-1/2", 10.50# csg:	0.0159 bbls/ft

Additional Data

Pictured Cliffs Perforations:	3088'-3130'
Baker Safety Joint:	3530'
Estimated TOC inside 7", 23.0# casing (assuming no loss):	3211'
Estimated TOC inside 7", 23.0# casing (actual):	4247'
Kick-Off Point:	4447'
Total Depth:	5950'

Cementing Instructions: 4-1/2", 10.50# Production Liner.

Notify BLM of Cementing Operations.
Do not change any cement volumes. Volumes based on statistical data of offset wells. Must avoid pumping cement up into Pictured Cliffs perforations.

1. Drill to New TD (5850'). Drill and extra 100' to 5950' if mist drilling was required for OH logs. Gauge well at designated depths per geologist. Circulate wellbore clean at TD and TOOH.

2. Run open hole logs per Geologist. Send copy to MOI immediately Production Engineer will provide completion procedure. After logging, TIH with 6-1/4" bit and clean out. Circulate wellbore clean with gas. TOOH and lay down drillpipe.

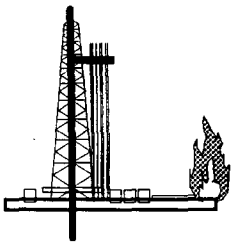
3. Change pipe rams to 4-1/2", install 4-1/2" stripper rubber. Run casing and float equipment as specified. Threadlock all connections to insert float valve. Tag TD with 4-1/2" casing. Pull off bottom and circulate well clean with gas until returns are clean at least 1 hour.

4. **Re-calculate all cement volumes - Check all volumes on location with service company.** Hold a safety meeting with all personnel on location in attendance. Monitor returns continuously.

5. Precede cement w/ 20 bbls gel water (2 sxs gel) - followed by 10 bbls fresh water. Mix and pump cement at 4 - 6 BPM. Drop displacement plug. Displace cement with calculated volume of fresh water. Anticipated displacement pressure is 700 PSI. Do not exceed 2000 PSI. Bump plug to 500 PSI over displacement pressure. Check float for integrity.
Note: Do not shut down to wash pumps and lines on displacement in a gas drilled hole.

6. Set minimum of 50,000# on slips and cut off casing. WOC 24 hours prior to perforating. Production Engineering will provide completion procedure after open hole log evaluation.

ZXC MERIDIAN OIL



CAPITAL WORKOVER WELL PROGRAM
FARMINGTON REGION

San Juan #10
Mesa Verde Sidetrack
760' FSL, 1050' FWL
Section 10, T-30-N, R-11-W
San Juan County, New Mexico

Area Team 4&5
1996 Discretionary Budget

Special Considerations:

Existing Pictured Cliff perforations will remain open throughout sidetrack.
This well will be plugged back with cement by Aztec Rig #266.
Aztec #266 will also drill out cement to Kick-off Point.
Whipstock will be used for Kick-Off.
Gas drilling for sidetrack portion of well.
Cliff House formation may be water wet.

Prepared: _____
Kurt A. Shipley
Drilling Engineer II

Approved: _____ 2/5/96
Drilling Superintendent

Reviewed: _____ 2/5/96

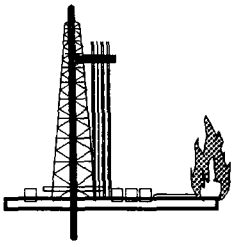
Meridian Oil Operational Policies:

No Smoking within 150' of any major fuel source, designated smoking areas provided.
Protective clothing must be worn at all times.
Report any unsafe conditions or activities to the rig supervisor immediately.
Any accident regardless of severity should be reported to rig supervisor immediately.
Notify rig supervisor immediately if abnormal conditions are encountered (kicks, lost circulation, tight hole, or unstable hole conditions).
All contractors must comply with all local, state, federal, and tribal rules and regulations.

Attachments: Material / Service Requisition, Maps to Location, Cement Notification Form,

Distribution: K.A. Shipley, P.W. Bent, W.S. Smithwick, J.C. Angvick, F.W. Seidel
Area 4&5 Team, Well File (original), Purchasing and Materials (Materials Requisition only)
Rig Supervisor's File (2 Copies)

MERIDIAN OIL



Air Care 1 Instructions

In Case of Major Emergency requiring Air Care 1:

1. Call 911.

2. Give Location to Operator.

Well Name:	**San Juan #10**
Latitude:	**36 Degrees, 49 Minutes, 12 Seconds.**
Longitude:	**107 Degrees, 10 Minutes, 31 Seconds.**

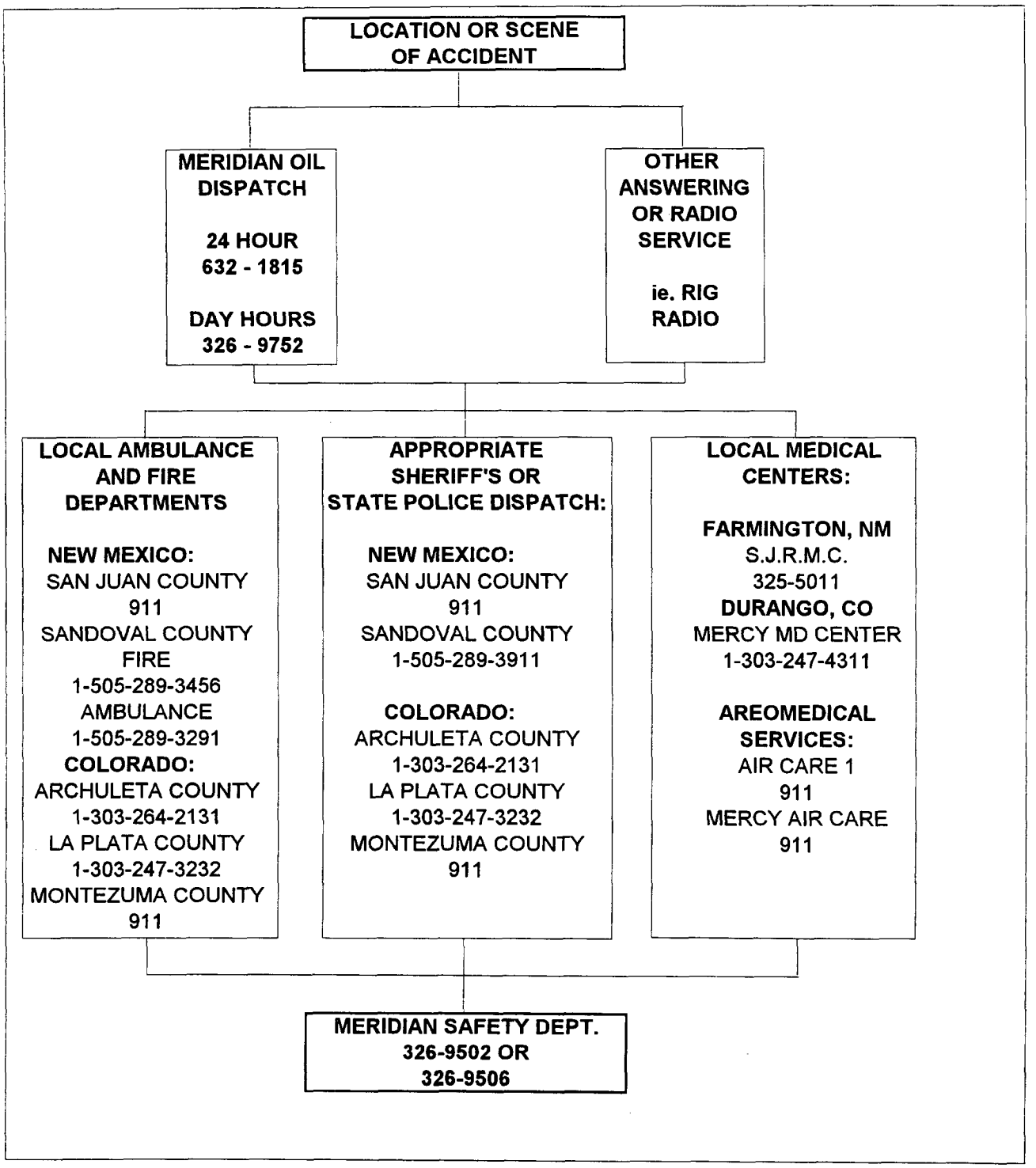
3. Locate and prepare a location for helicopter to land.

Additional Information: **760' FSL, 1050' FWL**
Section 10, T-30-N, R-11-W

Road Directions:

From Aztec: Highway 550 (North). Turn right on Navajo Dam Road (Highway 173 East). Turn left at mile marker #6. 2 miles to location.

MERIDIAN OIL INC.
FARMINGTON REGION
MAJOR ACCIDENT CONTINGENCY PLAN



MERIDIAN OIL

General Well Data

Well Name:	**San Juan #10**	Prepared:	1/29/96	
Objective:	Mesa Verde Sidetrack	Revised:		
Location (Footage):	760' FSL, 1050' FWL	Sundry/BLM:	8/23/95	
Section, Township, Range:	Section 10, T-30-N, R-11-W	Sundry/NM:	N/A	
Field:	Blanco Mesa Verde	NSL/NM:	N/A	
County:	San Juan County	WSR:	10/3/95	
State:	New Mexico	AFE #:	1Q73	
Authorized TD:	5850'	Authorized Cost	$406,108	Workover
Rig:	Aztec #266 / Drake #17	Estimated Days:	13	

Approximate Directions to Location

Latitude: 36 Degrees, 49 Minutes, 12 Seconds. Longitude: 107 Degrees, 10 Minutes, 31 Seconds.
From Aztec: Highway 550 (North). Turn right on Navajo Dam Road (Highway 173 East). Turn left at mile marker #6. 2 miles to location.

Production Data

Mesa Verde		Pictured Cliffs	
Current Rate	93 MCF/D	Current Rate	37 MCF/D
Cumulative Production	2,736 MMCF	Cumulative Production	2,736 MMCF
Estimated BHP	500 PSI	Estimated BHP	200 PSI
Remaining Reserves	806 MMCF	Remaining Reserves	173 MMCF

Geology

Elevation	**6473'**	**GL**	**6486'**	**KB**

Marker	Depths	Notes	Marker	Depths	Notes
Surface			Otero	**4130'**	
Ojo Alamo	**1750'**		**Kick-Off Point**	**4380'**	
Kirtland	**1890'**		Upper Cliff House	**4480'**	
Fruitland	**2710'**		Massive Cliff House	**4700'**	
Pictured Cliffs	**3094'**		Menefee	**4910'**	
Lewis	**3260'**		Massive Point Lookout	**5407'**	
Huerfanito Bentonite	**3821'**		Lower Point Lookout	**5500'**	
Navajo City	**3828'**		Mancos	**N/A**	
			Current TD	**5614'**	
			New TD	**5850'**	

Evaluation

Mudlogging
None. Per G. E. Christiansen, Operations Geologist (1/26/96).

Wireline Logs Schlumberger
Stack tools if possible. Repeat minimum 200' on all logs. Merge deepest GR onto all logs.
APS / GR from TD to Surface.
AIT / LDS / Temp / Cal from TD to Surface.

Cores
None.

Gauges While Drilling
Kick-off Point, 4450', 4680', 4900', 5390', 5500', TD. Note: 20 minute minimum on all gauges.

Existing Casing and Cement

Type	Interval	Hole Size	Casing Size	Casing Weight	Casing Type	Cement	TOC	Cement Notes
SCP	0'-175'	13-3/4"	10-3/4"	32.75#	H-40	200 sx	Surface	1.
ICP	0'-5294'	8-3/4"	7"	23.00#	J-55	225 sx	4470'	2.
Liner	5191'-5617'	6-1/4"	5-1/2"	15.50#	J-55	200 sx	Liner Top	3.

Cement Notes

1. 200 sx regular cement. Cemented to surface.
2. Estimated TOC: 1st Stage @ 4470', 2nd Stage @ 2838' (70% Efficiency).
   2 Stage Cement Job. 1st stage: 150 sx regular cement. 2nd stage: 75 sx regular cement.
3. Cement liner w/ 100 sx regular cement w/ 4% gel, 1/4 pps gilsonite, 1/4 pps flocele under cement retainer @ 5602'. Cement top of liner under packer @ 5105' w/ 100 sx regular cement.

Existing Tubing

	Tubing Size	Tubing Weight	Tubing Type	Threads	Depth Set	Joints	Tubing Notes
Mesa Verde	2-3/8"	4.70#	J-55	8rd	5486'	177	1.
Pictured Cliffs	1-1/4"	2.40#	J-55	10rd	3144'	99	2.

Tubing Notes

1. Baker Model N packer set @ 3186'. 103 jts above packer, 74 jts below packer. Bull plug on bottom w/ perfs from 5476'-5479'. Otis Type X S.N. @ 5475' above perfs.
   Tubing has locator type seal assembly and is not latched in Model "N" packer.
   Tubing has turned down N-80 collars.
2. Bull plug on bottom w/ perfs from 3142'-3144'. PSI S.N. @ 3141'.

Workover History

(4/28/66) Replaced packer. Ran Baker Model "N" Permanent Packer.

Sidetrack Well Program

Type	Interval	Hole Size	Casing Size	Casing Weight	Casing Type	Mud Type	Mud Weight	Viscosity	Hazards & Notes
PROD	4380'-5850'	6-1/4"	4-1/2"	10.50#	K-55, STC	Gas	N/A	N/A	1. - 5.

Hazards and Notes

1. Notify BLM prior to workover and all casing cement jobs.
2. Cliff House formation may be wet.
3. Pictured Cliffs perforations will remain open throughout entire job.
4. A 4-1/2" liner will be run in the sidetracked portion of the well.
5. The well will be dual completed.

Whipstock

Weatherford 5-1/2" Whipstock for 7", 20.0# or 23.0# casing (Bottom Trip - must have base).
Mills and service Turnkey operation provided by Weatherford.

Liner Hanger

4-1/2" X 7" Baker High-Flow-3 Liner Hanger without pack-off assembly.

Gas / Air Program

Type	Interval	Hole Size	Drilling Medium	Rate	Mist	Foamer per 20 bbls	Notes
PROD	4380'-5850'	6-1/4"	Gas	1500 cfm	5-10 bph	5-10 gal	1., 2.

Notes

1. Refer to Gas - Air / Mist Drilling Operational and Safety Compliance Checklist
2. Cliff House Formation may be water wet.
3. Pump stiff foam sweeps as necessary to clean hole with open Pictured Cliffs perforations.

BOP / Testing

Type

7-1/16" - 3000 psi working pressure double gate BOP equipped with blind and pipe rams.

Testing

Pressure test BOP stack to 200 psi for 10 minutes and 1500 psi for 30 minutes using pipe rams, pup joint and tubing hanger.
Pipe rams shall be function tested at least once each day for proper operation.
Blind rams shall be function tested at least once each trip.

Plug-Back Procedure

1. Move rig on location and rig up. Lay flow lines and relief lines. Spot 1 x 400 bbl frac tank on location and fill with water. Kill well with water.

2. Pull top section of wellhead. Rig up 7-1/16" (3M psi) BOP's. Pressure test BOP stack to 200 psi for 10 minutes and 1500 psi for 30 minutes with 1-1/4" offset pipe rams, blanking plug in 2-3/8" tubing, and 1-1/4" OD pup joint.
Maximum allowable pressure: 1500 psi.

3. TOOH and lay down on float 99 jts of 1-1/4", 2.40# EUE 10rd tubing. See attached tubing talley for tubing details. Send float to Meridian Oil yard for inspection and storage.

4. Release packer by picking up on 2-3/8" tubing and pulling locator type seal assembly out of Baker Model "N" Permanent Packer (seal assembly is not latched into permanent packer). TOOH w/ 177 jts of 2-3/8" 4.70# EUE tubing and stand back in derrick, if usable. See attached tubing tally for tubing details. Inspect tubing for any unusable joints. Lay down any unusable joints of tubing on float and call for Meridian Oil District Tools for workstring, if needed.
Do Not mix old tubing with Meridian Oil Workstring.

5. PU Baker Oil tools 7" CJ Milling Tool (Packer Plucker) and 2-3/8" workstring. TIH to Baker Model "N" Packer @ 3186'. Sting through packer with Milling Tool and pull up on tubing. This should verify that catch assembly is under packer. Establish circulation with gas-mist (approximately 5 - 10 bph mist) and begin mill top section of packer. When packer assembly is free, TOOH and lay down packer.

6. TIH with tubing (inspect all pins and boxes for wear) and 7" casing scraper to liner top @ 5191'. TOOH.

7. PU 7" cement retainer and 2-3/8" tubing and TIH to 5186' (5' above liner top) and set 7" cement retainer.

8. Load tubing with water and pressure test to 2000 PSI for 15 minues. Sting into cement retainer and establish circulation through cement retainer into 5-1/2" liner with water Squeeze 5-1/2" liner below cement retainer to 1000 PSI as listed below.
DO NOT ATTEMPT TO REVERSE OUT CEMENT WITH OPEN PICTURED CLIFFS PERFORATIONS.

5-1/2" Liner squeeze cement job				
Cement:	Class "B" Neat		Capacity of 5-1/2", 15.50# casing:	0.1336 cu. ft. / ft.
Sacks:	96	sacks		
Volume:	113.8	cu. ft.		
Density:	15.6	ppg	Excess Cement:	100 %
Yield:	1.18	cu ft/sk	Calculated Hole Volume:	56.9 cu. ft.
Mix Water:	5.2	gal/sk	Total Volume Pumped:	113.8 cu. ft.

Sting out of cement retainer. Leave 1 bbl of cement on top of retainer. Flush tubing clean with water. Spot 80 bbls of water in 7", 23.00# casing for cement bond log. TOOH and lay down stinger.

9. Run CBL/CCL/GR to TOC. Approximate location for TOC is 4470' (calculated @ 70% efficiency). Send a copy of logs to MOI immediately. Ensure good cement bond at whipstock location, approximately 4380'. If TOC is not sufficient, perforate 2 squeeze holes just above current TOC and attempt to establish and injection rate. Mix and pump Class "B" cement w/ 2% CaCl2, as necessary under a 7" cement retainer. Cement should be sufficient behind 7" casing for a good kick-off.

10. If TOC is sufficient for good Kick-Off, RIH with 7" CIBP and collar locator. Locate 7" casing collars above and below Kick-Off Point @ 4380'. Set CIBP 2' above collar near 4380'. Allow for a full 40' joint of casing for window to be cut for sidetrack (Weatherford 7" Mechanical Whipstock must have a base to be set).

11. TIH w/ 7" Fullbore packer and 2-3/8" workstring. Set packer below Pictured Cliffs perforations @ 3200'. Pressure test 7" casing below Pictured Cliffs perforations to 1000 PSI for 15 minutes. Release packer. Pull up in hole and reset packer @ 3000'. Pressure test 7" casing X 2-3/8" tubing annulus to 1000 PSI for 15 minutes. If casing pressure tested and CBL shows TOC above whipstock location, then GO TO STEP 12. If casing did not pressure test, locate holes with packer and tubing. Record location of holes in casing, injection rate and pressure. Notifiy Meridian Oil personnel. At this time a decision will be made to squeeze the holes with cement and / or complete the well as a single Pictured Cliffs completion. If a squeeze job is required, it will be provided at this time.

12. TOOH. If squeeze work was performed above Kick-Off Point, PU 6-1/4" bit and 2-3/8" tubing. PU 6-1/4" bit and 2-3/8" tubing. Drill out cement to Kick-Off Point @ 4380'. Do Not Drill CIBP @ 4380'.

13. TOOH and lay down tubing and / or work string on float and send to MOI Pipe Yard with Field Transfer Ticket.

14. ND BOP's. NU Wellhead. RD and move off location.
Well should now be ready for Sidetrack Rig to move in, pick up 7" Whipstock, 3-1/2" Drillpipe, and TIH to 4380' (Kick-off Point) for sidetrack portion of project.

Sidetrack Procedure

1. Move drilling/completion rig on location and rig up. Lay flow lines, relief lines, and blooie line.

2. Rig up 7-1/16" (5M psi) BOP's. Pressure test BOP stack to 200 psi for 10 minutes and 2500 psi for 30 minutes using pipe rams, pup joint and tubing hanger.
Maximum allowable pressure = 1500 PSI

3. Read previous well file and note work performed. The intent of their work will be to prepare the well for the sidetrack well to the point where the first operation will be to pick up a whipstock or motor, whichever is required. If well is not prepared for some reason, it may be necessary to drill out cement and test casing.

4. TIH w/ 7" whipstock on 3-1/2" drill pipe. Set whipstock @ 4380'. Mill window in 7" casing. The window cutting operation will be turnkeyed - providing whipstock, starting mill, window mill, watermelon mill, and ditch magnets as required. Mill window with gas - mist. See gas-mist requirements below.

5. Once window is dressed off, circulate hole until metal cuttings are removed from the system. Unload hole with gas and dry up wellbore.

6. TIH with Drilling Assembly w/ near bit reamer and 6-1/4" insert button bit. Take deviation survey after drilling 60' (should be between between 5 - 8 degrees). Drop reamer if angle is sufficient, if not drill another 30' and re-survey. It is important to invest time early in the sidetrack to assure a good kick-off. This means use maximum weight of drill collars and minimum RPM's to allow bit to build angle.

Kick-Off / Drilling Assembly
6-1/4" insert button bit
6-1/4" 3-Point Roller Reamer (1/8" under gauge)
(14) 4-3/4" drill collars
3-1/2" drill pipe to surface
10 - 12K WOB, 20 - 25 RPM (for Kick-Off)
10 - 12K WOB, 50 - 55 RPM (while Drilling)

Gas - Air / Mist Rates	
Medium:	Gas
Rate:	1500 cfm
Mist:	10 - 15 bbls/hr
Foamer:	10 - 15 bbls/hr

7. Drill to New TD (5850'). Drill and extra 100' if mist drilling was required for OH logs. Gauge well at designated depths per geologist. Circulate wellbore clean at TD and TOOH.

8. Run open hole logs per Geologist. Send copy to MOI immediately Production Engineer will provide completion procedure. After logging, TIH with 6-1/4" bit and clean out. Circulate wellbore clean with gas. TOOH and stand back drillpipe. Lay down drill collars.

Casing and Cement Program

Type	Interval	Hole Size	Casing Size	Casing Weight	Casing Type	Threads	Burst PSI	Collapse PSI
Liner	4180'-5850'	6-1/4"	4-1/2"	10.50#	K-55	ST&C	4790	4010

Float Equipment

Production Casing (4180'- 5850') Run in order listed below:

4-1/2"	Float shoe.
4-1/2"	40' shoe joint above guide shoe.
4-1/2"	Float valve.
4-1/2"	10.50#, K-55, STC Casing.
4-1/2" X 7"	Baker High-Flow-3 Liner Hanger without pack-off assembly w/ setting tool.
3-1/2"	~~15.50#~~ 13.30 drillpipe.
	No centralizers run in gas drilled hole.

Cementing

Production String of Casing Cement Job (4180'- 5850')

Lead - No Tail

Cement: 50/50 Class B Pozmix w/ 0.3% Halad-344, 1/4 pps Cellophane, 3 pps Gilsonite.

Sacks:	203 sacks	Excess Cement:	55 %
Volume:	265.5 cu. ft.	Calculated Gauge Hole Volume:	171.3 cu. ft.
Density:	13.5 ppg	Total Volume Pumped:	265.5 cu. ft.
Yield:	1.31 cu. ft. / sack		
Mix Water:	5.7 gal / sack		
		Cap. between 4-1/2" csg & 6-1/4" hole:	0.1026 cu. ft/ft
Displacement:	53.4 bbls	Capactiy of 4-1/2", 10.50# csg:	0.0159 bbls/ft
		Capactiy of 3-1/2", 15.50# DP:	0.00658 bbls/ft

Additional Data

Pictured Cliffs Perforations:	3088'-3130'
Estimated TOC with 3-1/2" inside 7", 23.0# casing (assuming no loss):	3508'
Estimated TOC with 3-1/2" inside 7", 23.0# casing (actual):	3952'
Kick-Off Point:	4380'

Recalculate displacement volume on location.

Cementing Instructions: 4-1/2", 10.50# Production Liner.

Notify BLM of Cementing Operations.
Do not change any cement volumes. Volumes based on statistical data of offset wells. Must avoid pumping cement up into Pictured Cliffs perforations.

1. Change pipe rams to 4-1/2", install 4-1/2" stripper rubber. Run casing and float equipment as specified. Threadlock all connections to float valve.

2. Make up liner and setting tool on the first joint of 3-1/2" drill pipe. Make up 4-1/2" casing and RIH. Make up first stand, open pipe rams, and TIH with tool joint below pipe rams. Close pipe rams. Install 3-1/2" stripping rubber in rotating head.

3. Open pipe rams. TIH with liner on 3-1/2" drill pipe to TD. Break circulation on last joint of drillpipe. Tag TD with 4-1/2" liner. Pull off bottom and circulate well clean with gas for 1 hour. Circulate well until returns are clean.

4. **Re-calculate all cement volumes - Check all volumes on location with service company.** Hold a safety meeting with all personnel on location in attendance. Monitor returns continuously.

5. Precede cement w/ 20 bbls gel water (2 sxs gel) - followed by 20 bbls fresh water. Mix and pump cement at 4 - 6 BPM. Drop displacement plug. Displace cement with calculated volume of fresh water. Anticipated displacement pressure is 700 PSI. Do not exceed 2000 PSI. Bump plug to 500 PSI over displacement pressure. Check float for integrity. Sting out of liner hanger. **DO NOT ATTEMPT TO REVERSE OUT CEMENT WITH OPEN PICTURED CLIFFS PERFORATIONS. Note: Do not shut down to wash pumps and lines on displacement in a gas drilled hole.**

6. WOC 24 hrs prior to perforating. Production Engineering will provide completion procedure after open hole log evaluation.

San Juan #10 - Mesaverde
Sidetrack Completion Procedure
Lat-Long by TDG: 36.821671 - 107.876434
SW/4 Section 10, T30N-R10W
March 1, 1996

Below is the completion procedure for the San Juan #10. The frac design is for a cross link gel with 12% resin coated sand. The average days for cleaning up sidetracks completed in Area 45 in 1995 was 9 days. These sidetracks were completed with 30# linear gel and slickwater. Due to the continual efforts to reduce costs, a completion method has been identified for savings in the overall completion cost. The amount of gelled water necessary to pump the same amount of sand is significantly less with a cross link fluid. In addition, the high viscosity cross link fluid will minimize banking of sand which will allow resin coated sand to set up near the wellbore. In 1995, Area 45 was successful in reducing costs by decreasing amount of water and clean up time. Since there is not an indication that the linear gel or slickwater completion has better reserves than a cross link gel, it is recommended that the San Juan #10 be completed with a cross link fluid and resin coated sand.

1. Hold safety meeting. Comply with all MOI, BLM and NMOCD rules and regulations. Install 10 frac tanks and 1x400 bbl rig tank. Fill each frac tank with 3#'s of biocide and filtered (25 micron) 1% KCl water.

2. TIH with 2-3/8" tubing and 3-7/8" bit. CO to PBTD, circ. hole clean, role w/ 1% KCL water. TOOH.

3. RU wireline and PU 4-1/2" (10.5#) gauge ring. Run gauge ring to PBTD.

4. RU wireline and run CBL-GR-CCL from PBTD to 150' above free pipe.

5. TIH w/ 4-1/2 " fullbore packer and two joints of 2-7/8" N-80 buttress frac string. Pressure test casing to 3800 psi. TOOH w/ packer.

6. Perforate the following Point Lookout interval using 3-1/8" HSC guns with 12 gram charges and 0.31" diameter holes: (25 holes total)

5372		
5381	**5460**	**5624**
5388	**5467**	**5630**
5404	**5484**	**5656**
5407	**5504**	**5785**
5413	**5570**	**5796**
5428	**5577**	**5750**
5445	**5600**	**5782**
5451	**5618**	**5794**

7. Inspect guns to ensure all perforations fired.

8. TIH w/ 4-1/2" fullbore packer and two joints of 2-7/8" N-80 buttress frac string.

9. Balloff Point Lookout perforations with 2000 gallons of 15% HCL acid and RCN balls (2 balls per perforation hole). Maximum allowable treating pressure is 3800 psi. TOOH. RU wireline, retrieve balls w/ 4-1/2" junk basket and report number of hits.

10. TIH w/ 4-1/2" fullbore packer and two joints of 2-7/8" N-80 buttress frac string.

11. RU frac company. Hold safety meeting. Pressure test surface lines to 4800 psi. **(Maximum allowable treating pressure is 3800 psi).** Fracture Stimulate Point Lookout interval at 40 BPM using 30# cross link gel and 160,000 #'s of 20/40 Arizona sand (12% resin coated). (See attached procedure.) 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.

13. TIH w/ 4-1/2" CIBP and set @ ± **5300'**. TIH w/ 4-1/2" fullbore packer, load hole with 1% KCL water and pressure test CIBP to 3800 psi. TOOH.

14. Perforate Menefee interval using 3-1/8" HSC guns with 10 gram charges and 0.29" diameter holes: (19 holes total)

4994	**5114**
5000	**5164**
5021	**5190**
5036	**5196**
5054	**5230**
5074	**5238**
5085	**5246**
5092	**5260**
5099	**5266**
	5278

Inspect guns to ensure all perforations fired.

15. TIH w/ 4-1/2" fullbore packer and two joints of 2-7/8" N-80 buttress frac string.

16. Balloff Menefee perforations with 1500 gallons of 15% HCL acid and RCN balls (2 balls per perforation hole). Maximum allowable treating pressure is 3800 psi. TOOH. RU wireline, retrieve balls w/ 4-1/2" junk basket and report number of hits.

17. TIH w/ 4-1/2" fullbore packer and two joints of 2-7/8" N-80 buttress frac string.

18. RU frac company. Hold safety meeting. Test surface lines to 4800 psi. **(Maximum allowable treating pressure is 3800 psi).** Fracture stimulate Menefee @ 30 BPM using 30# cross link gel and 60,000 #'s of 20/40 Arizona sand (12% resin coated). Do not over displace during flush. Shut in well immediately after completion of the stimulation until pressure falls to zero.

19. Release packer and TOOH standing back frac string. Check and inspect packer.

20. Wireline set a 4-1/2" RBP @ ± 4940'. TIH w/ 4-1/2" fullbore packer, load hole with 1% KCL water and pressure test RBP to 3800 psi. TOOH. Dump sand on top of RBP w/ dump bailer.

21. Perforate the Cliffhouse interval using 3-1/8" HSC guns with 10 gram charges and 0.29" diameter holes: (25 holes total)

4621	**4795**
4636	**4805**
4657	**4834**
4680	**4841**
4708	**4850**
4722	**4861**
4730	**4873**
4740	**4891**
4746	**4905**
4756	**4913**
4764	**4919**
4778	**4922**
4788	

Inspect guns to ensure all perforations fired.

22. TIH w/ 4-1/2" fullbore packer and two joints of 2-7/8" N-80 frac string. Balloff Cliffhouse perforations with 1500 gallons of 15% HCL acid and RCN balls (2 balls per perforation hole). Maximum allowable treating pressure is 3800 psi. TOOH. RU wireline, retrieve balls w/ 4-1/2" junk basket and record number of hits.

23. TIH w/ 4-1/2" fullbore packer and two joints of 2-7/8" N-80 buttress frac string.

24. RU frac company. Hold safety meeting. Pressure test surface lines to 4800 psi. **(Maximum allowable treating pressure is 3800 psi.)** Fracture Cliffhouse @ 40 BPM with 30# cross link gel and 60,000 #'s of 20/40 Arizona sand (12% resin coated). Do not over displace during flush. Shut in well immediately after completion of the stimulation until pressure falls to zero.

25. Release packer and TOOH laying down frac string.

26. TIH w/ 2-3/8" tubing w/ notched collar and CO to RBP @ ± 4940'. Obtain pitot gauge for Cliffhouse interval. TOOH. TIH w/ retrieving head and release RBP @ ± 4940'. TOOH.

27. TIH w/ 3-7/8" mill and CO to CIBP @ 5300'. Obtain pitot gauge for Cliffhouse / Menefee interval. TOOH. Drill out CIBP @ ± 5300'. TOOH.

28. TIH with 2-3/8" tubing w/ notched collar and CO to PBTD. 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.

29. When sand production has diminished, TOOH.

30. RU wireline company. Run After Frac GR from 5794' to top of tracer activity. RD wireline.

31. TIH with one joint of 2-3/8", 4.7#, J-55 tubing w/ expendable check, an F-nipple, then the remaining 2-3/8" tubing. CO to PBTD. Land tubing near bottom perforation (5794').

32. ND BOP's, NU WH. Pump off expendable check. Obtain final pitot up the tubing if possible. If well will not flow on it's own, make swab run to FN. If a swab run is not necessary, run a broach on slickline to ensure that the tubing is clear. RD and MOL. Return well to production.

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

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator MERIDIAN OIL INC. Lease SAN JUAN Well No. 10

Location of Well: Unit M Sect 10 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	TBG

PRE-FLOW SHUT-IN PRESSURE DATA

	Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Upper Completion	6-2-95	7 DAYS	196	
Lower Completion	6-2-95	5 DAYS	303	

FLOW TEST NO. 1

Commenced at (hour,date)* 6-7-95 Zone producing (Upper or Lower) LOWER

TIME (hour,date)	LAPSED TIME SINCE*	PRESSURE Upper Completion	PRESSURE Lower Completion	PROD. ZONE TEMP	REMARKS
5-Jun		191	301		
6-Jun		195	302		
7-Jun		196	303		
8-Jun		199	252		
9-Jun		201	304		

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

(Continue on reverse side)