MERIDIAN OIL
A Subsidiary of BURLINGTON RESOURCES

March 11, 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: Riddle B #5
SE/4 Section 23, 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 Gallup and Dakota intervals during the proposed workover. The zones to be commingled have common ownership. All offset operators shown on the attached plat and the Bureau of Land Management will receive notification of this downhole commingling application.

This Dakota has not produced since 1988 and the Gallup will be added during the proposed workover. The well is presently not a good producer due to a casing failure and poor producing efficiency. The commingling of the subject well will result in better producing efficiency for both intervals. 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 acidize the damaged Dakota interval and to payadd and fracture stimulate the Gallup interval. 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 Dakota 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 the Dakota in this well and the Gallup in an offset well 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 anticipated to be within a 50% variance. (A bottom hole pressure will be obtained for the Gallup interval during the proposed workover to verify.)

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

The allocation of the commingled production will be calculated using production history and flow tests obtained from the Dakota and Gallup 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 Dakota and Gallup, 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

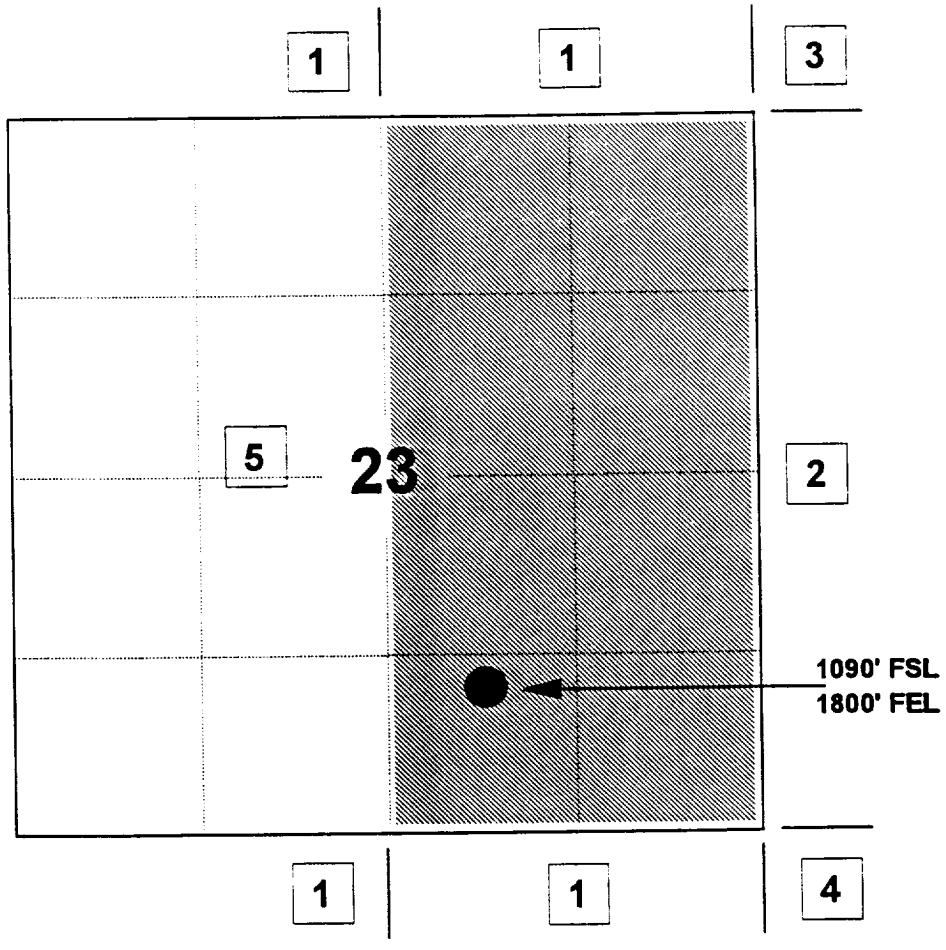
MERIDIAN OIL INC

RIDDLE B #5

OFFSET OPERATOR \ OWNER PLAT

Dakota / Gallup Formations Commingle Well

Township 30 North, Range 10 West



See Attachment

Dakota Formation

RIDDLE B #5
OFFSET OPERATOR PLAT
DAKOTA FORMATION

1.	Meridian Oil Inc.	
2.	Amoco Production Company	PO Box 800, Denver, CO 80201
3.	Meridian Oil Inc. &	
	Vastar Resources Inc.	15375 Memorial Dr., Houston, TX 77079
	Elizabeth Jeanne Turner Calloway	4801 St. Johns, Dallas, TX 75205
	James Glenn Turner, Jr.	500 Trammel Crow Center, Dallas, TX 75201
	Frederick Eugene Turner	4925 Greenville Ave., Dallas, TX 75206
	John Lee Turner	8585 N. Stemmons #925, Dallas, TX 75247
	Mary Frances Turner, Jr. Trust	PO Box 2320, Dallas, TX 75221
4.	Amoco Production Company	
	Koch Industries, Inc.	PO Box 2256, Wichita, KS 67201
	Four Star Oil & Gas Company	PO Box 2100, Denver, CO 80201
5.	Meridian Oil Inc. &	
	Chevron USA Inc.	PO Box 599, Denver, CO 80201
	Frank A. Schultz,	500 N. Akard, Ste. 2160, Dallas, TX 75201

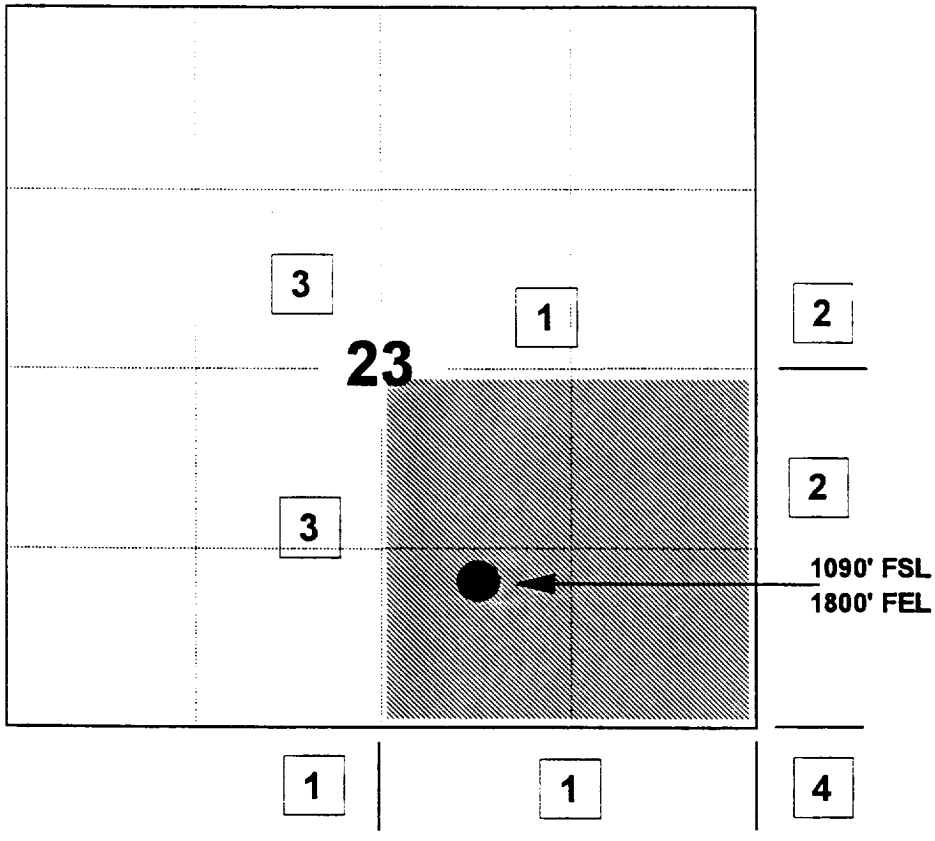
MERIDIAN OIL INC

RIDDLE B #5

OFFSET OPERATOR \ OWNER PLAT

Dakota / Gallup Formations Commingle Well

Township 30 North, Range 10 West



See Attachment

Gallup Formation

RIDDLE B #5
OFFSET OPERATOR PLAT
GALLUP FORMATION

1.	Meridian Oil Inc.	
2.	Amoco Production Company	PO Box 800, Denver, CO 80201
3.	Meridian Oil Inc. &	
	Chevron USA Inc.	PO Box 599, Denver, CO 80201
	Frank A. Schultz,	500 N. Akard, Ste. 2160, Dallas, TX 75201
4.	Koch Industries, Inc.	PO Box 2256, Wichita, KS 67201
	Four Star Oil & Gas Company	PO Box 2100, Denver, CO 80201

MERIDIAN OIL

March 11, 1996

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

RE: Riddle B #5
SE/4, Section 23, 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 Dakota and Gallup 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

March 26, 1996

Subject: Riddle # B-5 comingled fluid tests

Two samples were received for the tests, one from the Riddle B #5 and one from the Schumacher #13. The purpose of these tests were to determine the compatabiliy of the produced fluids for the future comingling of the producing zones.

The following samples were received:
Dakota oil from the Riddle B #5
Gallup oil from the Schumacher #13
No water was present in the samples

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

Riddle B #5 Dakota oil = 56*
Schumacher #13 Gallup oil = 34.2*
Combined oil Gravity = 42.2*

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.

CONCLUSION

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

Analysis No. _____

Date _____

Operator Meridian oil
Well Schumacher #13
Field _____
Formation Gallup
Depth _____
County San Juan
State N.M.

Date Sampled _____
Date Received March 25, 1996
Submitted By Mary Gallegos
Worked By L. Shepherd
Sample Description Gallup oil

API Gravity 34.2 ° at 60°F
*Paraffin Content — % by weight
*Asphaltene Content — % by weight
Pour Point _____ °F
Cloud Point _____ °F

Comments: Amber Colored oil, 3% water, Paraffin.
Combined Gallup/Dakota Gravity = 42.2

Analyst L. Shepherd

*Report calculations and data on back.

Analysis No. _____

Date _____

Oil Analysis

Operator Meridian oil

Well Keddie B #5

Field _____

Formation Dakota

Depth _____

County San Juan

State N.M.

Date Sampled _____

Date Received March 25, 1996

Submitted By Mary Ellen

Worked By D. Shepherd

Sample Description Dakota oil

API Gravity 56 ° at 60°F

*Paraffin Content ___ % by weight

*Asphaltene Content ___ % by weight

Pour Point _____ °F

Cloud Point _____ °F

Comments: Clear Condensate

Analyst D. Shepherd

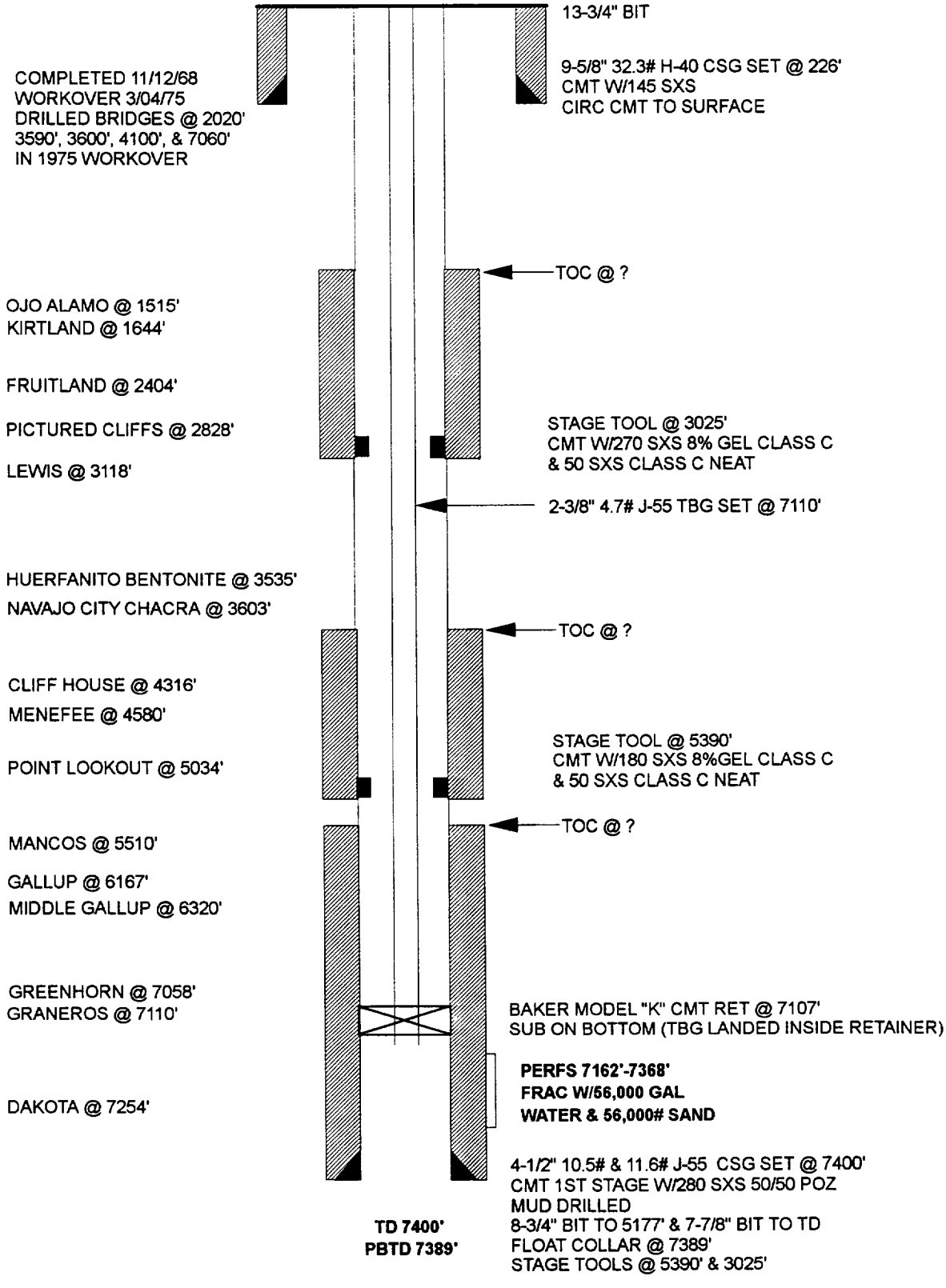
*Report calculations and data on back.

RIDDLE B #5

CURRENT

BASIN DAKOTA

UNIT O, SEC 23, T30N, R10W, SAN JUAN COUNTY, NM



Pertinent Data Sheet - Riddle B #5

Location: 1090' FSL, 1800' FEL, Unit O, Section 23, T30N, R10W, San Juan County, New Mexico

Field: Basin Dakota

Elevation: 6207' GL

TD: 7400'
PBTD: 7379'

Spud Date: 10-11-68

Completed: 11-12-68

Workover: 03-04-75

Initial Potential:
AOF: 4841 MCFD
SICP: 2132

DP No: 51767A
Prop. No: 012567900
Fed. No: SF-078200-B

Casing/Liner Record:

Hole Size	Csg Size	Wt. & Grade	Depth Set	Cement	Top/Cement
13 3/4"	9 5/8"	32.3#	226'	145 sxs	Circ/Surface
7 7/8"	4 1/2"	11.6/10.5# K55	7400'	280 sxs Mud	Unknown
8 3/4" Bit to 5177', 7 7/8" Bit to TD			2nd Stage	230 sxs	Unknown
			3rd Stage	320 sxs	Unknown
		Stage Tool @	3025'		
		Stage Tool @	5390'		
		Float Collar @	7389'		

Tubing Record:

Tbg Size	Wt. & Grade	Depth Set
2 3/8"	4.7# J-55	7110'
Baker Model 'K' Cmt Retainer @		7107'

Formation Tops:

Ojo Alamo:	1515'	Menefee:	4580'
Kirtland:	1644'	Point Lookout:	5034'
Fruitland:	2404'	Mancos:	5510'
Pictured Cliffs:	2828'	Gallup:	6167'
Lewis:	3118'	Middle Gallup:	6320'
Huer Bentonite:	3535'	Greenhorn:	7058'
NC Chacra:	3603'	Graneros:	7110'
Cliff House:	4316'	Dakota:	7254'

Logging Record: I-ES, FDC-GR, TS

Stimulation:

Perf: 7162' - 7177', 7254' - 7274', 7330' - 7340', 7358' - 7368' w/25 SPZ

Frac: 56,000# sand, 56,000 gal water & 300 gal acid. Dropped 3 sets of 25 balls.
Flush w/5,712 gal water.

Workover History:

01/75: Pull tbg, tried to circ mud out w/triplex pump. Tried to jet hole clean w/booster.
Hole bridged off @ 2020'. Drl bridges @ 3590', 3600', 4100' & 7060'.
Ran 2 3/8" tbg. Set @ 1934'. Pull bad tbg. CO to 7357'. Ran Baker Model 'K' cmt retainer.
Set @ 7107'. Ran 2 3/8" tbg in retainer @ 7110'.

Transporter: Sunterra Gas Gathering

Riddle B #5 - Dakota/Gallup
Acidize Dakota / Payadd Gallup / Casing Failure Repair
Lat-Long by TDG: 36.793289 - 107.850525
SE/4 Section 23, T30N-R10W
REVISED COMPLETION PROCEDURE 3/18/96

1. Hold safety meeting. MIRU. Install safety equipment and fire extinguishers in strategic locations. Install 3 frac tanks and 1x400 bbl rig tank. Fill each frac tank with 3#'s of biocide and filtered (25 micron) 1% KCl water. Determine weather or not to use gas or air. If air use 12-15 BPH mist rate.

2. Obtain and record all wellhead pressures. ND WH, NU BOP. Unsting from retainer and TOOH with 2-3/8" tubing set at 7110' (tubing is landed in a Baker Model "K" cement retainer @7107'). Inspect and replace bad tubing as necessary.

3. Pick up 2-3/8" tubing, 4-1/2", 11.6# casing scraper and 3-7/8" bit and TIH. CO to cement retainer @ 7107'. Load hole w/ 1% KCl water, TOOH and lay down casing scraper and bit.

4. Run CBL-CCL-GR from 7100' to surface under 1000 psi. Send copy of CBL to office and a squeeze procedure will be provided. If unable to run under pressure, TIH w/ packer and isolate leak. Pressure test ± 100' below failure to 3800 psi for future frac. (Set packer in good cement.) Adjust step 12 depending on results of CBL and squeeze work.

5. If squeeze work was necessary, TIH w/ 3-7/8" bit and tubing and drill out cement. Obtain 1500 psi pressure test and re-squeeze if necessary. Drill up cement retainer set at 7107'. TOOH w/ tubing and bit.

6. TIH w/ 4-1/2" fullbore packer on 2-3/8" tubing. Set packer @ 7000'. Monitor backside w/ 500 psi. during acid job.

7. Acidize the Dakota perforations with a pad of 30,000 scf of Nitrogen, followed by 2000 gallons of mud acid (12% HCl and 3% HF acid) with 24,000 scf of Nitrogen. Maximum allowable treating pressure is 3800 psi. Shut in for 1 hour. Unload spent acid and Nitrogen up tubing until it dies. Release packer and TOOH.

8. TIH w/ 2-3/8" tubing and CO to PBTD. Obtain pitot gauge for Dakota interval. TOOH.

9. RU wireline and set a 4-1/2" RBP @ 6700'. Dump 10' of sand on top of RBP with dump bailer.

10. Perforate the following Gallup interval using 12 gram charges, 0.31" diameter holes and 3-1/8" HSC guns: (18 perforations total.)

6327	6478
6331	6488
6337	6503
6372	6523
6382	6532
6396	6547
6410	6554
6434	6563
6455	6582

Inspect guns to ensure all perforations fired.

11. TIH w/ 2-3/8" tubing and 4-1/2" fullbore packer. Set packer @ ± 6600' and pressure test RBP to 3800 psi w/ 1% KCL. Release packer, PUH and set packer @ ± 6150'.

12. Balloff Gallup perforations with 1500 gallons of 15% Acedic acid w/ 10% methonol and 36 RCN ball sealers. Maximum allowable treating pressure is 3800 psi. TIH w/ packer and knock balls off perforations. TOOH.

13. PU 2-7/8" N-80 frac string w/ ± 200' of 2-3/8" tubing and 4-1/2" fullbore packer. TIH to ± 100' below the squeeze holes and set packer. Load backside w/ water. Hold and monitor backside w/ 500 psi during frac job.

14. RU frac company. Hold safety meeting. Test surface lines to 7000 psi. **(Maximum allowable treating pressure is 6000 psi.) At static conditions, maximum allowable treating pressure is 3800 psi.** Fracture stimulate the Gallup interval w/ 70m lbs of sand (15% resin coated) at 23 BPM. (See attached procedure). Shut in well immediately after completion of the stimulation until pressure falls to zero. Release packer and TOOH w/ frac string.

15. TIH w/ 2-3/8" tubing and CO to RBP set @ 6700' until sand production is minimal. Obtain pitot gauge for Gallup interval. TOOH. TIH w/ Amerada Pressure Bomb set under a RBP and set @ ± 6300' and shut in well while monitoring Gallup pressure for 24 hours. After 24 hours, release RBP and TOOH. Have BHP information sent to engineering within 24 hours.

16. TIH w/ retrieving head and CO to RBP. Obtain pitot gauge for Gallup interval. Release RBP set @ 6700' and TOOH.

17. TIH with 2-3/8" tubing with notched collar and CO to PBTD of 7389'. PU above the Dakota perforations and flow the well naturally, making short trips for clean up when necessary. Obtain pitot gauge for Gallup/Dakota intervals after clean up.

18. When sand returns have diminished, TOOH.

19. 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 of 7389'. Land tubing near bottom perforation (7368').

20. ND BOP's, NU WH. Pump off expendable check. Obtain final pitot. RDMO. Return well to production.