

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

RECEIVED
MAIL ROOM
MAR 9 1996

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
Amoco Production Company
Attention: Patty Haeefe

3. Address and Telephone No.
P.O. Box 800, Denver, CO 80201 (303) 830-4988

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1650' FSL 1450' FWL Sec. 5 T 30N R 10W Unit K

5. Lease Designation and Serial No.

SF-080917

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Atlantic B LS 4

9. API Well No.

3004509855

10. Field and Pool, or Exploratory Area

Blanco Mesaverde

11. County or Parish, State

San Juan New Mexico

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plane
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other Sidetrack	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Amoco Production Company requests permission to sidetrack this well per the attached procedure. Also attached is the "Plan of Existing Well Pad and Proposed Enlargement for Re-entry" information.

RECEIVED
MAR 13 1996

OIL CON. DIV.
DIST. 3

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Signed

Patty Haeefe

Title

Staff Assistant

02-09-1996

(This space for Federal or State office use)

APPROVED

Approved by

Conditions of approval, if any:

Title

FEB 14 1996

DISTRICT MANAGER

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

MMCOO

SJOET Well Work Procedure

Name Atlantic B LS #4
Version: Preliminary
Date: February 9, 1996
Budget: Repair
Repair Type: Sidetrack Completion

Objectives:

1. Complete new sidetrack wellbore in Mesaverde.

Pertinent Information:

Location:	1650' FSL x 1450' FWL, Sec 5, T30N-R10W	Horizon:	MV
County:	San Juan	API #:	3004509855
State:	New Mexico	Engr:	Kutas
Lease:	SF-080917	Phone:	W-(303)830-5159
Well Flac:	978743		

Economic Information:

APC WI:	25%	Current MV Production	15 MCFD
Estimated Cost:	\$100,000	MV Anticipated Prod	250 MCFD
Payout:			
Max Cost -12 Mo. P.O.			
PV15:			
Max Cost PV15:	\$M		

Note: Economics will be run on all projects that have a payout exceeding ONE year.

Formation Tops: (Estimated formation tops)

Nacimiento:		Menefee:	4690'
Ojo Alamo:	1408'	Point Lookout:	5160'
Kirtland Shale:	1521'	Mancos Shale:	
Fruitland:	2534'	Gallup:	
Pictured Cliffs:	2837'	Graneros:	
Lewis Shale:	2890'	Dakota:	
Cliff House:	4468'	Morrison:	

Bradenhead Test Information:

Test Date:	Tubing:	Casing:	BH:	
Time	BH	CSG	INT	CSG
5 min				
10 min				
15 min				

Comments:

Atlantic B LS #4

Orig. Comp. 12/52

TD = 5500', PBTB = 5400'

Elevations: GL = 6197'

Page 2 of 3

1. MIRU wireline unit. Run gauge ring to ensure clean casing. Tag for and report PBTB.
2. Run GR/CCL/TMD from TD' to 500' above to top of Cliffhouse. Fax log copy to Denver to select perforation intervals.
3. RU perforating equipment. Perforate PLO pay intervals using limited entry techniques. Perf intervals will be identified from TMD log. Utilize 3 1/8" HCP w/ 12.5 g charges (0.34" EHD, 13.13" Penetration).
4. Break down perforations using 2% Kcl water and 7/8" RCN balls w/ 1.1 SG. Recover balls with junk basket.
5. RU fracture stimulation equipment. Fracture stimulate PLO pay according to frac schedule A. Flowback well as soon as stimulation equipment is disconnected and moved off. Flow well back starting with 1/4" choke gradually increasing to 1/2" choke. Flow well back overnight or over weekend. Record flowing and shutin pressures, choke size, and liquid recoveries.
6. TIH w/ wireline and tag for fill. If sand fill is below next perf interval(s) then set wireline CIBP between MN and PLO. If sand fill is into MN section then a rig or CTU will be required to clean out fill prior to proceeding with completion.
7. Once CIBP is set, pressure test to ensure good seal.
8. RU perforating equipment. Perforate MN pay intervals using limited entry techniques. Perf intervals will be identified from TMD log. Utilize 3 1/8" HCP w/ 12.5 g charges (0.34" EHD, 13.13" Penetration).
9. Break down perforations using 2% Kcl water and 7/8" RCN balls w/ 1.1 SG. Recover balls with junk basket.
10. RU fracture stimulation equipment. Fracture stimulate MN pay according to frac schedule A. Flow back well as soon as stimulation equipment is disconnected and out of the way. Flow well back starting with 1/4" choke gradually increasing to 1/2" choke. Flow well back overnight or over weekend. Record flowing and shutin pressures, choke size, and liquid recoveries.
11. TIH w/ wireline and tag for fill. If sand fill is below next perf interval(s) then set wireline RBP between CH and MN. If sand fill is into CH section then a rig or CTU will be required to clean out fill prior to proceeding with completion.
12. Once RBP is set, pressure test to ensure good seal.
13. RU perforating equipment. Perforate CH pay intervals using limited entry techniques. Perf intervals will be identified from TMD log. Utilize 3 1/8" HCP w/ 12.5 g charges (0.34" EHD, 13.13" Penetration).
14. Break down perforations using 2% Kcl water and 7/8" RCN balls w/ 1.1 SG. Recover balls with junk basket.

Atlantic B LS #4

Orig. Comp. 12/52

TD = 5500', PBTD = 5400'

Elevations: GL = 6197'

Page 3 of 3

15. RU fracture stimulation equipment. Fracture stimulate CH pay according to frac schedule A. Flow back well as soon as stimulation equipment is disconnected and out of the way. Flow well back starting with 1/4" choke gradually increasing to 1/2" choke. Flow well back overnight or over weekend. Record flowing and shutin pressures, choke size, and liquid recoveries.
16. MIRUSU. TIH w/ tubing x bit and scraper. Clean out fill to RBP. Pull RBP. Clean out MN interval. DO CIBP. Clean out to PBTD.
17. Land 2 3/8" production tubing. Set tbg at approximately mid-perf depth' (1/2 mule shoe on bottom w/ seating nipple one joint up). Final setting depth will be selected based on pay intervals from TMD log. Flow well to clean up. Swab well in if necessary. RDMOSU.
18. Obtain gas and water samples. SI well pending equipment hook up. Turn well over to production.

Atlantic "B" LS #4

1,650' FSL, 1,450' FWL Sect. 5, 30N, 10W
San Juan County, New Mexico

February 07, 1996
revised 02/09/96

Sidetrack Procedures

PREPARATION

Note--7" 26# Casing/8 joints on bottom I think!!!

1. MIRUSU complete with 3.5 power swivel, circulating equipment and rental string of 2.875" drill pipe or Hydril PH-6 tubing and 6-3.750" drill collars. Ensure that the drill pipe and collars have recent inspection papers.
2. Blow down well, ND tree, NUBOPS and pull 2.375" tubing. (Landed at 5,220'. May be stuck) If stuck, cut at 4,300' and lay down.
3. Pick up drill pipe and set CIBP at 4,250'. Circulate hole with fresh water. Mix and pump 25 sx Class "B" cement (neat) at 15.7 ppg and spot on top of bridge plug (100'+). POH.
4. Test casing to 750 psi. If test positive, proceed to step 5. If casing leaks, pick up RTTS packer and isolate hole(s).
5. Run CBL from 4,000' to top of cement (2,425' by TS). Check for good cement at KOP of 3,500' and check for cement below surface pipe at 175' to see if previous operators pumped down bradenhead. If no good cement is found at KOP, perforate, set retainer 100' above holes and squeeze with 100 sx of 50:50 Pozmix containing 0.4 % Halad 344, 0.25 #/sx flocele, and 5-10 #/sx Gilsonite and CAL-SEAL as recommended by Howco. Remainder of bradenhead work will depend on CBL but will probably require the following steps.
6. Perforate 4 JSPF at 2,500' (top of Fruitland) unless casing leaks found near this depth or CBL shows good cement on top of Fruitland at 2,534'.
7. Set cement retainer at 2,400' and attempt to establish circulation to bradenhead. If circulation obtained, mix and pump sufficient cement to circulate. Use same cement mixture as in step #5 and proceed to step #9. If no circulation obtained, squeeze holes with 100 sx of the same and proceed to step #8.
8. Perforate 4 JSPF at 1000' (above Ojo Alamo), set retainer at 900' and repeat step #7.
9. WOC. NDBOPS, install casing spool above bradenhead to receive the 4.500" long string. NUBOPS.
10. Pick up 6.125" tooth bit with premium bearings, 6-3.750" drill collars on the drill pipe (tubing) and drill out cement and retainers. Test each perforated interval to 750 psi after drilling and re-squeeze with 100 sx cement if necessary. Re-run CBL if cement at KOP is questionable
11. RDMOSU.

Atlantic "B LS #4

SIDETRACK

page 2

1. MIRURT complete with 3.500" drill string, air package and misting equipment. NUBOPS and test to 2,000 psi with third party tester on first well and every third well thereafter.
2. Set Smith Anchor-Stock whipstock at KOP. Mill window utilizing air/mist, reaming window sufficiently to run the necessary angle-building and stiff bottom hole assemblies without problem.
3. Pick up premium, gage protected, 6.125" TC bit (Smith diamond enhanced gage F37 DODPD w/motor or F37 DP conventional and cut curve as indicated on the attached program. Trip out when bit wears out and pick up stiff bottom hole assembly with monel collar and rotate ahead to total measured depth. Take single shot surveys every 150-200' to make certain that the angle is not dropping excessively. A final directional plot is required at TMD by the NMOCD. Generally, the program is as follows.

KOP--	3,500' TVD	
Orientation--	None	
Curve--	2.0 degrees/100'	
Maximum angle--	20-30 degrees	
Total depth--	5,350' TVD	5,470' TMD
4. Lay down the 3.500" drill string, run 4.500" used casing using a marker joint at 1,000' from bottom. Utilize stand-off bands (4.625" x 6.000") every second joint on the lower 20 joints and every third joint thereafter up to 100' inside the existing 7.000" casing.
5. Cement w/325 sx (60% excess) 50:50 Pozmix containing 2 % gel, 6 % salt, 0.4 % Halad 344, 0.25 #/sx flocele, 5 #/sx gilsonite. Pump 20 bbls water ahead, mix and pump cement at 13.5-14.0 ppg and displace with water. Utilize two wiper plugs (discuss w/ Howco--attempt to ensure that the cement is completely wiped from the casing to allow a rigless completion). This single stage job should bring cement at least 500' inside the 7.000" casing. Reciprocate the casing throughout the cement job, passing joints. Land casing in full tension. Run temperature survey 10-12 hours after bumping plug.

6. RDMORT.



brad

02/09/96 10:01 AM

Amoco Production Company

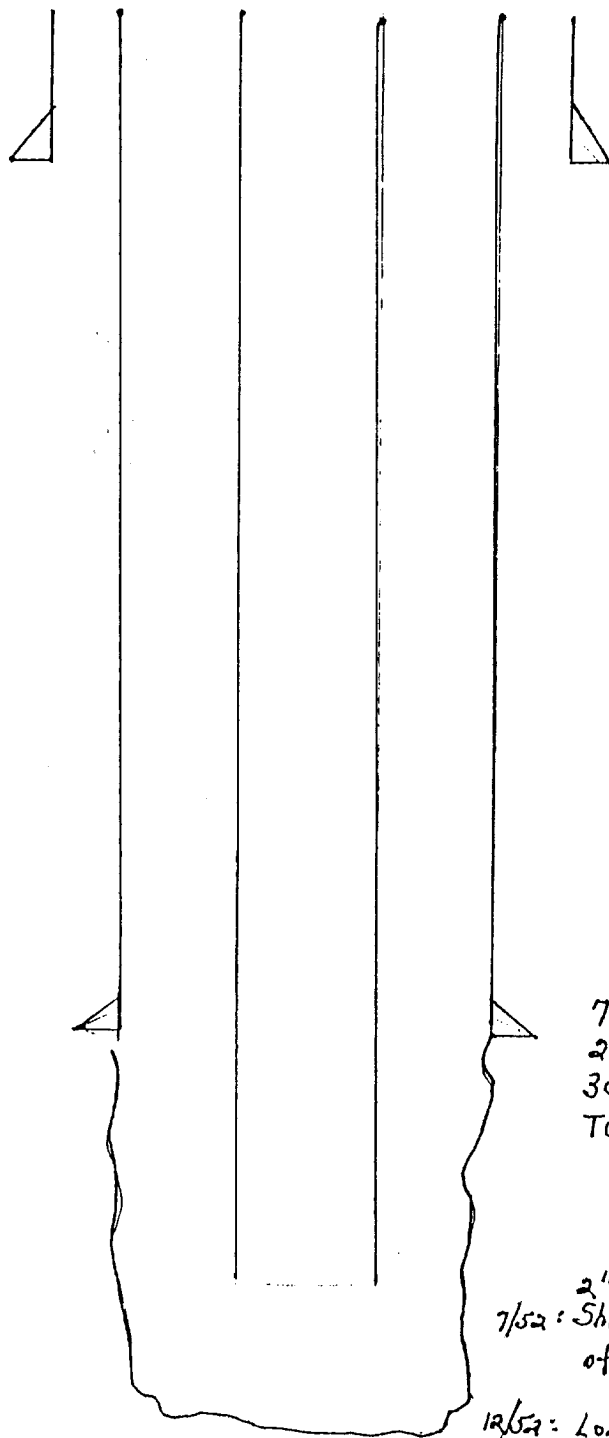
ENGINEERING CHART 6.1.1 0.01

Sheet No. _____ Of _____
 Title _____
 Appn _____
 Date 10/26/95
 By _____

SUBJECT Atlantic B LS 4 (MV)
5-30N-10W 3004509855

Tops:

OA 1408
 KL 1521
 FL 2534
 PC 2837
 LS 2890
 CH 4430
 MF 4637
 PL 5053
 MS 5180



9 5/8" CSA 175'
 25.4 #
 circ' ant to surface

7" CSA 4345'
 26 # S-95, 23 # J-55
 300 SX. cement & 1 SX. Fiscal
 TOC = 2425' (temp. survey)

2" TSA 5220'
 7/52: Shot 4404-5244' w/ 1845 gts
 of S.N.G. Nat. gauge 195 mcf/d
 12/52: Loaded hole w/ 765 gts. S.N.G.
 from 4930-5240. Nat. gauge 765 mcf/d

TD = 5246

Original completion 12/52.

**AMOCO PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM**

File No.: a111cb4.dwg
Date: 2/9/96

FINAL COPY

Lease: Atlantic "B" LS Well No. #4
County: San Juan, New Mexico Location: 1650' FSL, 1450' FWL Sect.5, 30N, 10W
Former name: None Field: Basin Mesaverde 30 10

OBJECTIVE: Further exploit the Mesaverde.

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Actual GL-----	Estimated KB	6197	6209
Rotary	KOP - TD	Marker	True Vert Depth	Msd.Depth (ft.)	SS Elev. (ft.)
SPECIAL SURVEYS		Ojo Alamo		1,408	4,801
TYPE	DEPTH	Kirtland		1,521	4,688
NONE		Fruitland*		2,534	3,675
		Pictured Cliffs*		2,837	3,372
		Lewis Shale		2,890	3,319
		Cliff House*	4,430	4,468	1,779
		Menefee	4,637	4,690	1,572
		Point Lookout	5,053	5,160	1,156
		Mancos			
		KOP	3,500	3,500	
REMARKS: Logs run as considered necessary. None anticipated		TOTAL DEPTH 5,350 5,470			
		#Probable completion * Possible pay			
		OJO ALAMO IS POSSIBLE USEABLE WATER			
SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE	DEPTH INTERVAL, ETC	FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		As penetration rate pe ICP TD		Geolograph	KOP - TD
Remarks:		Remarks:			
		Mud Logging Program:		None	
		Coring Program:		None	

MUD PROGRAM:

Approx. Interval Type Mud Weight, #/gal Vis, sec/qt. W/L, cc's/30 min.

0-----SCP None--Recompletion only
SCP----ICP None--Recompletion only
KOP----TD Air/Mist

////

REMARKS:

An air/mist circulating medium will be used as necessary to remove steel cuttings and to protect air motors.

CASING PROGRAM:

Casing String Estimated Depth Casing Size Hole Size Landing Point, Cement, Etc

Conductor				
Surface	In place			
Intermediate	In place			
Production	5,470	4 1/2"	6 1/8"	1

Remarks:

1. Production casing will be cemented back up into the 7.000" intermediate.

GENERAL REMARKS:

Well was drilled and completed in 1952. Will plug the existing open hole with CIBP set in 7.000" casing at 4,250' and 100' of Class "B" cement spotted on top (4,250'-4,150'). Casing will be tested, repaired if necessary and the upper water sands will be protected by circulating and /or squeezing with cement. A whipstock will be set at +/-3,500' and the well redrilled into the Mancos. Southern Rockies Engineering staff to design completion program.

Form 46 Reviewed by:

Logging program reviewed by:

PREPARED BY:

Kutas/bilyeu

APPROVED:

For Production Dept

APPROVED:

For Exploration Dept.

Form 46 7-84bw

Units are FEET

T	Meas.	Survey		Depth	North	East	Vert.	Closure		Dog
I	Depth	Incl	Dir	(TVD)	-South	-West	Section	Dist	Dir	Leg
	.00	.00	.00	.00	.00	.00	.00	0	0	.0
	3500.00	.00	.00	3500.00	.00	.00	.00	0	0	.0
	3600.00	3.00	.00	3599.95	2.62	.00	2.62	3	0	3.0
	3700.00	5.00	.00	3699.71	9.59	.00	9.59	10	0	2.0
	3800.00	7.00	.00	3799.15	20.05	.00	20.05	20	0	2.0
	3900.00	9.00	.00	3898.17	33.96	.00	33.96	34	0	2.0
	4000.00	11.00	.00	3996.65	51.33	.00	51.33	51	0	2.0
	4100.00	13.00	.00	4094.46	72.12	.00	72.12	72	0	2.0
	4200.00	15.00	.00	4191.48	96.31	.00	96.31	96	0	2.0
	4300.00	17.00	.00	4287.61	123.87	.00	123.87	124	0	2.0
	4400.00	19.00	.00	4382.71	154.77	.00	154.77	155	0	2.0
	4500.00	21.00	.00	4476.67	188.97	.00	188.97	189	0	2.0
	4600.00	23.00	.00	4569.38	226.43	.00	226.43	226	0	2.0
	4700.00	25.00	.00	4660.73	267.10	.00	267.10	267	0	2.0
	4800.00	27.00	.00	4750.61	310.93	.00	310.93	311	0	2.0
	4900.00	27.00	.00	4839.71	356.33	.00	356.33	356	0	.0
	5000.00	27.00	.00	4928.81	401.73	.00	401.73	402	0	.0
	5100.00	27.00	.00	5017.91	447.13	.00	447.13	447	0	.0
	5200.00	27.00	.00	5107.01	492.53	.00	492.53	493	0	.0
	5300.00	27.00	.00	5196.11	537.93	.00	537.93	538	0	.0
	5400.00	27.00	.00	5285.21	583.33	.00	583.33	583	0	.0
	5473.00	27.00	.00	5350.26	616.47	.00	616.47	616	0	.0

Atlantic B LS 4 w/MIV offsets

31-
10

30-
10

<p>(31)</p> <p>MOI +Atlantic C4A 175/1870</p> <p>MOI +Atlantic C3 60/2391</p> <p>MOI +Atlantic C4 80/1732</p> <p>MOI +Atlantic C3A 175/1793</p>	<p>(32)</p> <p>APC +Atlantic B LS 3A 340/2461</p> <p>APC +Atlantic B LS 3 160/6398</p> <p>MOI +Sunray K C1 175/6793</p> <p>MOI +Sunray K C1A 9/1468</p>	<p>(33)</p> <p>APC +Atlantic B LS 6A 300/2048</p> <p>APC +Atlantic B LS 6 230/5208</p> <p>APC +Atlantic B LS 6 120/4456</p> <p>APC +Atlantic B LS 1A 200/1602</p>
<p>(34)</p> <p>MOI +Atlantic C6A 63/458</p> <p>MOI +Atlantic C5 25/1418</p> <p>MOI +Atlantic C6 80/1299</p> <p>MOI +Atlantic C5A 70/943</p>	<p>(35)</p> <p>APC +Atlantic B LS 5A 175/1098</p> <p>APC +Atlantic B LS 5 225/4082</p> <p>APC +Atlantic B LS 4 15/691</p> <p>APC +Atlantic B LS 4 300/1855</p>	<p>(36)</p> <p>APC +Atlantic B LS 2A 200/1418</p> <p>APC +Atlantic B LS 3 110/3362</p> <p>APC +Atlantic B LS 1 20/870</p> <p>APC +Atlantic B LS 1 340/1376</p>
<p>(37)</p> <p>MOI +Sullivan 1A 190/878</p> <p>MOI +Sullivan 1 0/590</p> <p>MOI +Sunray J 1 150/1756</p> <p>MOI +Sunray J 1A 200/1028</p>	<p>(38)</p> <p>MOI +Kelly B 1A 280/685</p> <p>MOI +Kelly B 1A 20/1268</p> <p>MOI +Kelly B 1A 150/126</p> <p>MOI +Kelly Knoll 1 200/1184</p> <p>MOI + ? ?</p>	<p>(39)</p> <p>MOI +Sunray E 2A 150/1109</p> <p>MOI +Sunray E 1 250/8768</p> <p>MOI +Sunray E 2 55/1781</p> <p>MOI +Sunray E 1A 150/572</p>

PLAN OF EXISTING WELL PAD AND PROPOSED ENLARGEMENT FOR RE-ENTRY

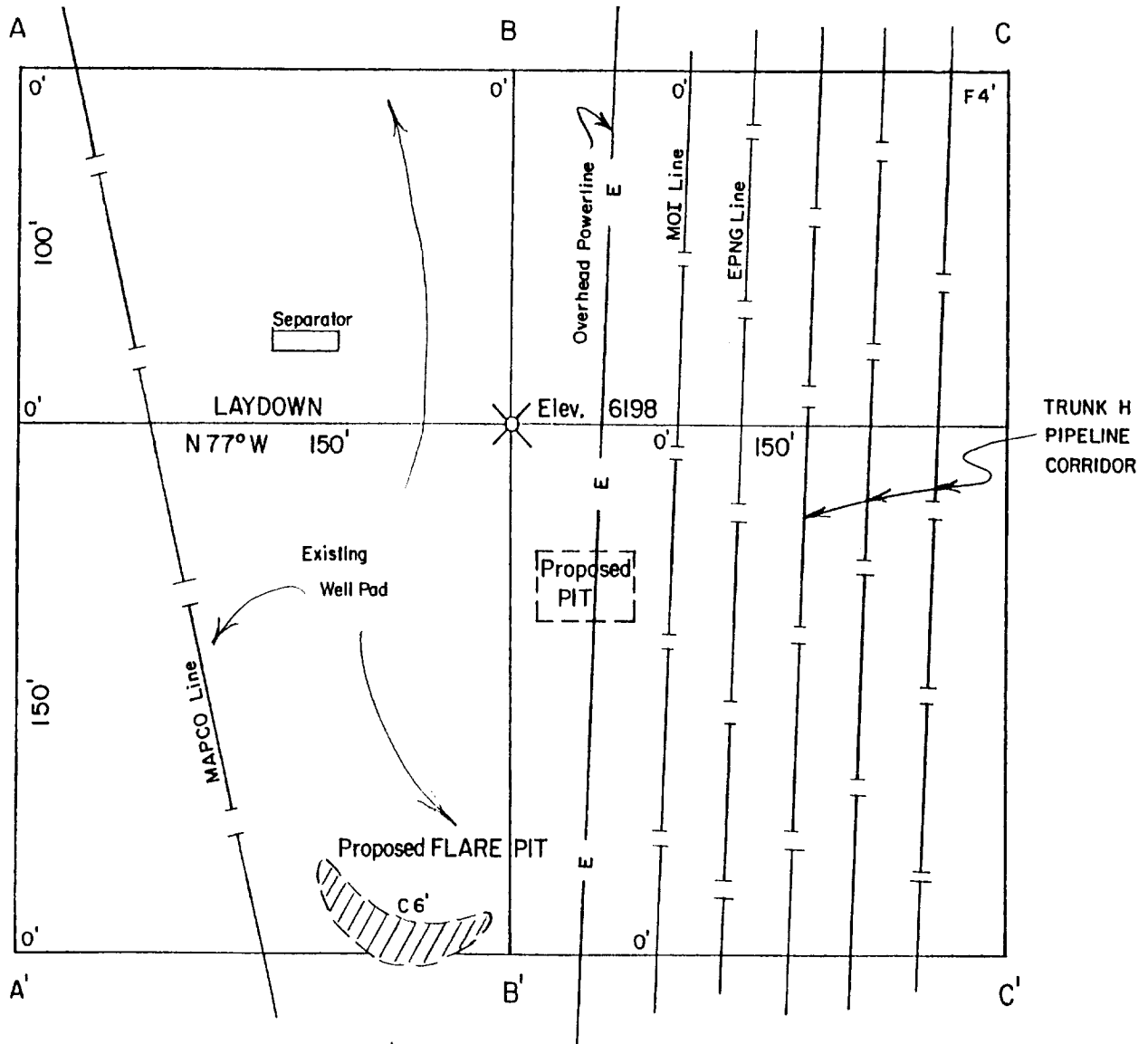
AMOCO PRODUCTION COMPANY

ATLANTIC B # 4

1660' F/SL 1450' F/WL

SEC. 5, T 30 N, R 10 W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO



NM OCC Record Footage & Elev. - 1650' F/SL 1450' F/WL
6195 (5-23-52 Spud Date)

NOTE: Contractor should call 1-800-321-2537 for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least 2 days prior to construction.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Farmington District Office
1235 La Plata Highway
Farmington, New Mexico 87401

IN REPLY REFER TO:

Attachment to Notice of

Intention to Workover

Re: Workover

Well: 4 Atlantic B LS

CONDITIONS OF APPROVAL

1. If bradenhead remedial cementing work is to be performed, the following intervals should be cemented: (TOC @ 2425', Top of Fruitland @ 2458')

A. Ojo Alamo (bottom @ 1515', top @ 1375') -- At a minimum, place a cement plug from 1565' to 1325' plus 100% excess cement in the 7.0" annular space.

D. Surface casing (set @ 175') -- Perforate at 225' and circulate cement to the surface.