

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.

3004510052

5. Indicate Type of Lease

STATE ☐

FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Yager LS

8. Well No.

#1

9. Pool name or Wildcat

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"
(FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:

OIL
WELL ☐

GAS
WELL ☒

OTHER

2. Name of Operator

Amoco Production Company Gail M. Jefferson, Rm 1295C

3. Address of Operator

P. O. Box 800, Denver Colo. 80201 (303) 830-6157

4. Well Location

Unit Letter M : 990 Feet From The South Line and 990 Feet From The West Line

Section 31 Township 31N Range 11W NMPM San Juan County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

OTHER: Sidetrack

☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐

ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐

PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Amoco Production Company requests permission to sidetrack the above referenced well per the attached procedures.

If you have any technical questions please contact Khanh Vu at (303) 830-4920 or Gail Jefferson for any administrative concerns.

RECEIVED
MAR 25 1996

OIL CON. DIV.
DIST. 3

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Gail M. Jefferson

TITLE

Sr. Admin. Staff Asst.

DATE 3/22/96

TYPE OR PRINT NAME

TELEPHONE NO.

(This space for State Use)

APPROVED BY

Emil Busch

DEPUTY OIL & GAS INSPECTOR, DIST. #3

TITLE

DATE

MAR 29 1996

CONDITIONS OF APPROVAL, IF ANY:

As ordered

March 21, 1996

Yager LS #1

990' FSL, 990' FWL Sec. 31, 31N, 11W

San Juan County, New Mexico

Sidetrack Procedures

PREPARATION

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 had a recent inspection.
2. Blow down well, ND tree, NUBOPS and pull 2.375" tubing (Landed at 4,806'). Lay down tubing with drill pipe if tubing parts.
3. Pick up drill pipe and set CIBP at 4,000'. 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. Run CBL from 2,600' to top of cement. Check for good cement at KOP of 3,400' and check for cement below surface pipe at 165' 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 cement work will depend on CBL but will probably require the following steps.
5. Set cement retainer at 1,800' and attempt to establish circulation to bradenhead. If circulation obtained, mix and pump sufficient cement to circulate. Use same cement mixture as in **step #4** and proceed to **step #7**. If no circulation obtained, squeeze holes with 100 sx of the same and proceed to **step #6**.
6. Perforate 4 JSPF at 1,200' (above Ojo Alamo), set retainer at 1,100' and repeat **step #5**.
7. WOC. NDBOPS, install casing spool above bradenhead to receive the 4.500" long string. NUBOPS.
8. Pick up 6.250" 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 any question of good cement at KOP.
9. RDMOSU.

Yager LS #1

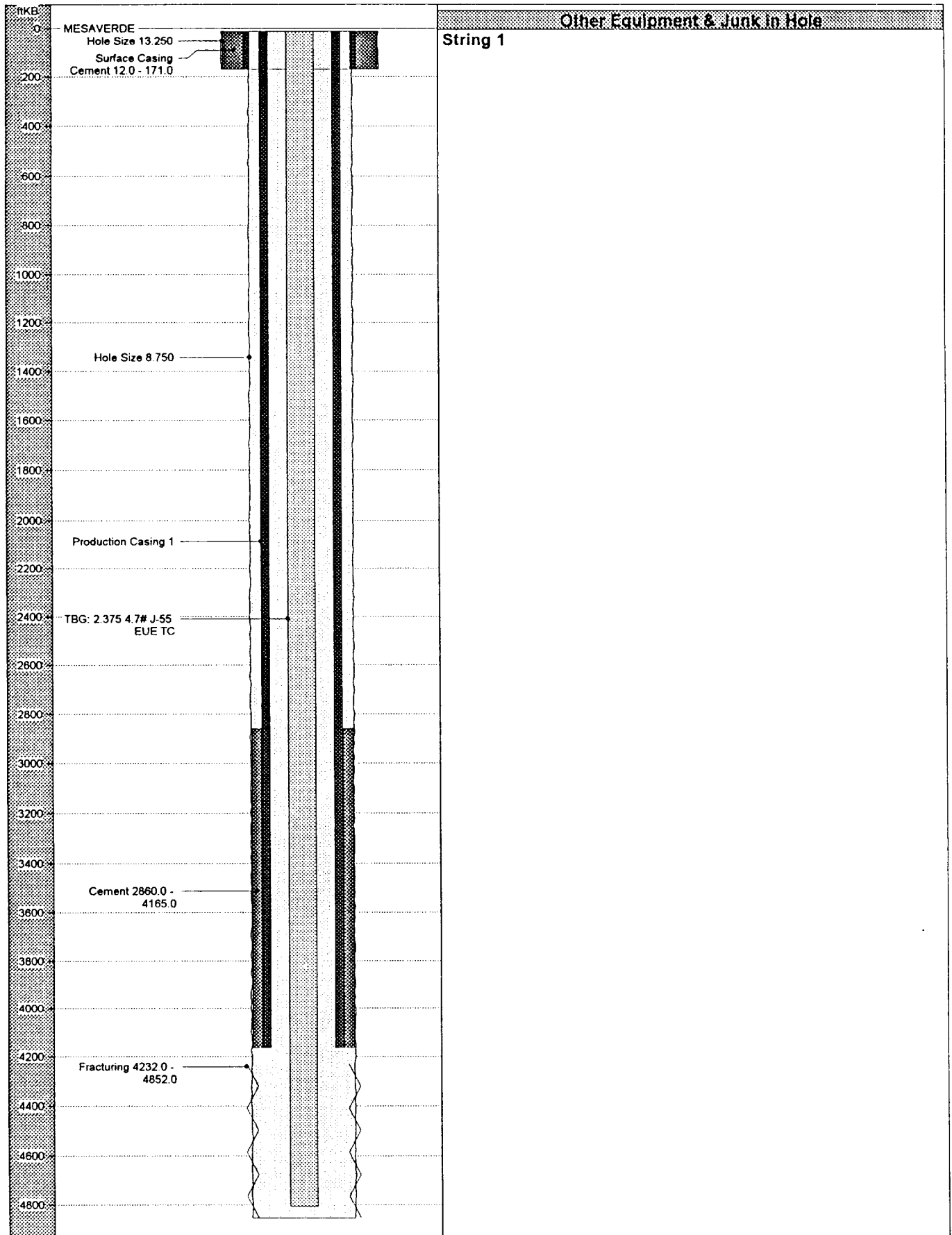
SIDETRACK

page 2

1. MIRU Rig 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. Orient whipstock at KOP at 90 degrees with gyro, running gyro from surface for tie-in. Mill window utilizing air/mist, reaming window sufficiently to run directional and stiff bottom hole assemblies without problem.
3. Pick up premium, gage protected, 6.125" TC bit, directional equipment and cut curve as indicated on the attached directional 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 the general azimuth direction is acceptable and that the angle is not dropping excessively. A final directional plot is required at TMD by the NMOCD.
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. RDMO Rig

Yager LS #1
Orig. Comp. 4/53
TD = 4852'
Elevations: GL = 5847'
Page 2 of 2

1. MIRU wireline unit. Run gauge ring to ensure clean casing. Tag for and report PBTD.
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 MN & 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 MN & 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. MIRUSU. TIH w/ tubing x bit and scraper. Clean out fill to PBTD.
7. 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.
8. Obtain gas and water samples. SI well pending equipment hook up. Turn well over to production.



AMOCO PRODUCTION COMPANY
DRILLING and COMPLETION PROGRAM

Lease/Well#: Yager LS #1 (Cased Hole Sidetrack)
 County: San Juan New Mexico
 Former name:

Surface Location: 990' FSL & 990' FWL of Section 31, T31N, R11W
 Field:

OBJECTIVE: Mesa Verde Gas

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER		
TYPE OF TOOLS	DEPTH OF DRILLING	Actual GL-----Estimated KB	5450	5462
Rotary	4800' TVD	Marker	Depth (ft.)	SS Elev. (ft.)

LOGGING PROGRAM	DEPTH	Ojo Alamo	905	4,557
No open hole logs required.		Kirtland	1,018	4,444
		Fruitland Coal	1,922	3,540
		PC *	2,280	3,182
		Lewis Shale	2,435	3,027
		Cliff House	3,855	1,607
		Menefee Shale *	3,955	1,507
		Point Lookout *	4,603	859
		Mancos	4,708	754
		Gallup		
		Greenhorn		

Logging Program Remarks:	TOTAL DEPTH	4,800	662
	* Possible pay		
	** Probable completion		
	Ojo Alamo is possible usable water		

SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE	DEPTH INTERVAL, ETC	FREQUENCY	DEPTH	FREQUENCY	DEPTH
None				Geologist	Int - 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.
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Sdk point - TD	Air/Mist			
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Mud Program Remarks:

CASING PROGRAM:

Casing String	Estimated Depth	Casing Size	Hole Size	Landing Point, Cement, Etc
Conductor				
Surface	5-1/2" already set at 2388'			
Production	4,800	4-1/2"	6.25"	1

Casing Program Remarks:
 1 - Circulate cement to at least 300' above the sidetrack window.

GENERAL REMARKS:

Business Unit Engineering staff to design completion program.

Form 46 Reviewed by:	Logging program reviewed by:	
PREPARED BY:	APPROVED:	APPROVED:
Webb/Ovitz		
Form 46 7-84bw	For Production Dept	For Exploration Dept
Date: 3/21/96	Rev. Date: 3/21/96 15:39	File: yagerls1.xlw

Amoco Production Co.

Structure : Yager LS #1

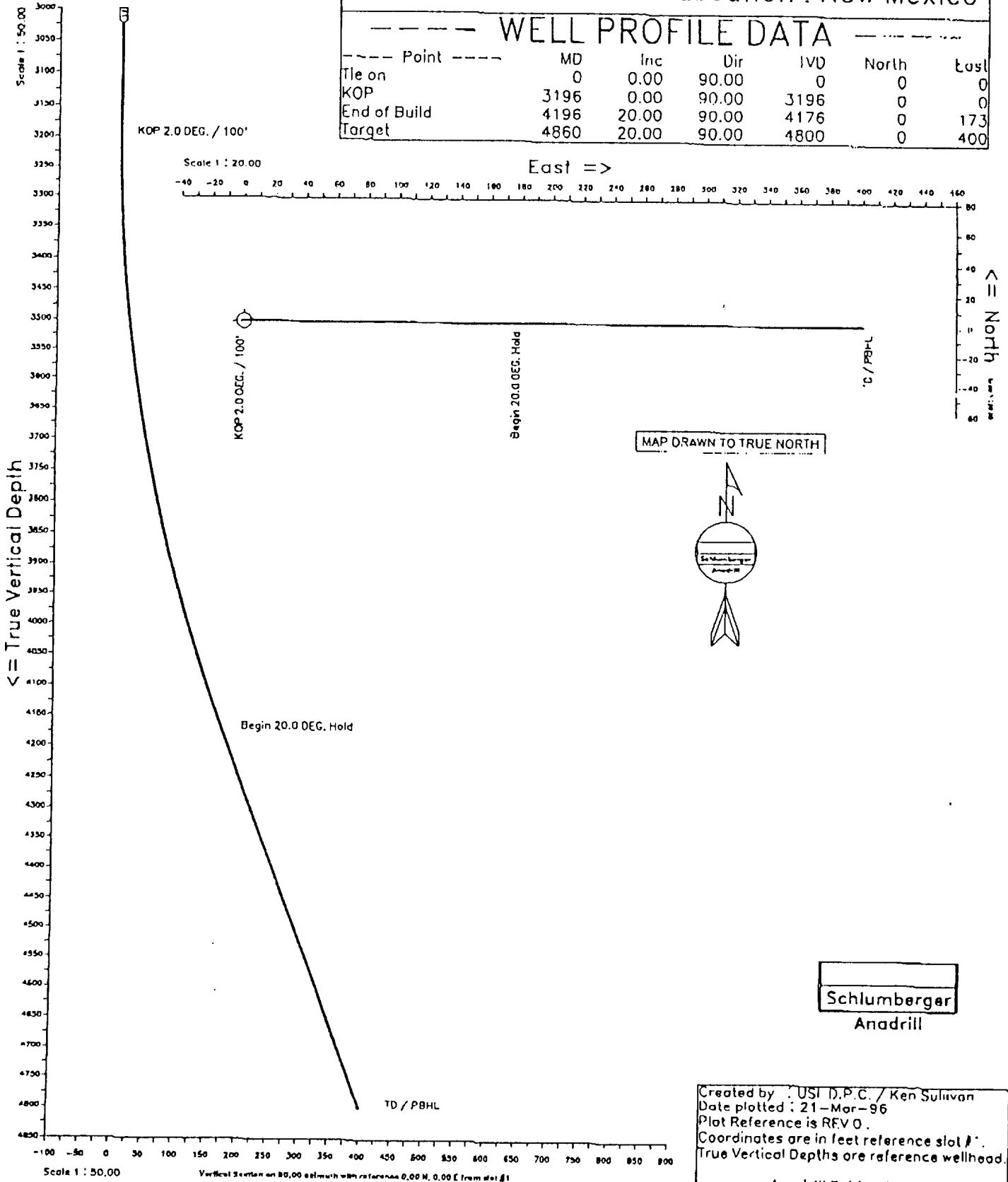
Well : #1

Field : San Juan

Location : New Mexico

WELL PROFILE DATA

Point	MD	Inc	Dir	IVD	North	East
Tie on	0	0.00	90.00	0	0	0
KOP	3196	0.00	90.00	3196	0	0
End of Build	4196	20.00	90.00	4176	0	173
Target	4860	20.00	90.00	4800	0	400



Amoco Production Co.
Yager LS #1
slot #1
San Juan
New Mexico

P R O P O S A L L I S T I N G

Your ref : REV 0
Our ref : prop2426
Other ref :

Date printed : 21-Mar-96
Date created : 21-Mar-96
Last revised : 21-Mar-96

Field is centred on n36 34 0.000,w108 17 0.000,-111
Structure is centred on n36 34 0.000,w108 17 0.000,-111

Amoco Production Co.
Yager LS #1, #1
San Juan, New Mexico

PROPOSAL LISTING Page 1
Your ref : REV 0
Last revised : 21-Mar-96

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100Ft	Vert Sect	
0.00	0.00	90.00	0.00	0.00 N	0.00 E	0.00	0.00	
500.00	0.00	90.00	500.00	0.00 N	0.00 E	0.00	0.00	
1000.00	0.00	90.00	1000.00	0.00 N	0.00 E	0.00	0.00	
1500.00	0.00	90.00	1500.00	0.00 N	0.00 E	0.00	0.00	
2000.00	0.00	90.00	2000.00	0.00 N	0.00 E	0.00	0.00	
2500.00	0.00	90.00	2500.00	0.00 N	0.00 E	0.00	0.00	
3000.00	0.00	90.00	3000.00	0.00 N	0.00 E	0.00	0.00	
3195.87	0.00	90.00	3195.87	0.00 N	0.00 E	0.00	0.00	KOP 2.0 DEG. / 100'
3295.87	2.00	90.00	3295.85	0.00 N	1.75 E	2.00	1.75	
3395.87	4.00	90.00	3395.71	0.00 N	6.98 E	2.00	6.98	
3495.87	6.00	90.00	3495.32	0.00 N	15.69 E	2.00	15.69	
3595.87	8.00	90.00	3594.57	0.00 N	27.88 E	2.00	27.88	
3695.87	10.00	90.00	3693.33	0.00 N	43.52 E	2.00	43.52	
3795.87	12.00	90.00	3791.49	0.00 N	62.60 E	2.00	62.60	
3895.87	14.00	90.00	3888.92	0.00 N	85.10 E	2.00	85.10	
3995.87	16.00	90.00	3985.51	0.00 N	110.98 E	2.00	110.98	
4095.87	18.00	90.00	4081.14	0.00 N	140.21 E	2.00	140.21	
4195.87	20.00	90.00	4175.68	0.00 N	172.77 E	2.00	172.77	Begin 20.0 DEG. Hold
4500.00	20.00	90.00	4461.47	0.00 N	276.79 E	0.00	276.79	
4860.25	20.00	90.00	4800.00	0.00 N	400.00 E	0.00	400.00	TD / PBHL

All data is in feet unless otherwise stated
Coordinates are from slot #1 and TVDs are from wellhead.
Vertical section is from wellhead on azimuth 90.00 degrees.
Calculation uses the minimum curvature method.

Amoco Production Co.
Yager LS #1, #1
San Juan, New Mexico

PROPOSAL LISTING Page 2
Your ref : REV 0
Last revised : 21-Mar-96

Comments in wellpath

MD	TVD	Rectangular Coords.		Comment
3195.87	3195.87	0.00 N	0.00 E	KOP 2.0 DEG. / 100'
4195.87	4175.68	0.00 N	172.77 E	Begin 20.0 DEG. Hold
4860.25	4800.00	0.00 N	400.00 E	TD / PBHL

All data is in feet unless otherwise stated
Coordinates are from slot #1 and TVDs are from wellhead.
Vertical section is from wellhead on azimuth 90.00 degrees.
Calculation uses the minimum curvature method.