New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-5
(June 1990)

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

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: LC-031621 (A)

6. If Indian, Allottee or Tribe Name:

7. If Unit or CA, Agreement Designation:

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

8. Well Name and No.: Britt "A-6" No. 2

2. Name of Operator: Doyle Hartman

9. API Well No.: 30-025-05938

3. Address and Telephone No.: 500 N. Main St., Midland, Tx 79701 (915-684-4011)

10. Field and Pool, or Exploratory Area: Eumont GAs

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1980' FSL and 660' FWL (L)
Section 6, T-20-S, R-37-E, NMPM

11. County or Parish, State: Lea Co., NM

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☒ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☒ Casing Repair and cement job	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Return well to beneficial use	☐ 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 pertinet 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 markders and zones pertinent to this work.)*

For Details of Completed Operations, please refer to page 2 of 8, 3 of 8, 4 of 8, 5 of 8, 6 of 8, 7 of 8 and 8 of 8 attached hereto, and made a part hereof.

JAN

14. I hereby certify that the foregoing is true and correct
Signed [signature] Title Engineer Date 01/04/02

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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.

*See Instruction on Reverse Side

1C

7A Eunice Monument GB/SA

Details of Completed Operations

Moved in backhoe, on 6-4-01. Dug 13'-deep hole around wellhead. Installed 5 1/2" O.D., 15.5 lb/ft tieback nipple back to surface, from top of 7 5/8" x 5 1/2" casinghead.

Installed new 2" risers back to surface, from 13 3/8" x 7 5/8" and 7 5/8" x 5 1/2" casingheads. Equipped risers with 2" 3000-psi ball valves.

Rigged up well service unit. Ran new 2 3/8" O.D. tubing string, 5 1/2" Model "C" RBP, and 5 1/2" Model "C" packer. Pressure tested 5 1/2" casing, from 0' to 1201', to 500 psi. Pressure dropped to 0 psi, in one minute. Located leak in 5 1/2" O.D. casing, between 879' and 944'.

Acidized leak, with 850 gal of 15% NEFE acid. Performed injectivity test, at a rate of 0.4 BPM, at 2900 psi. 2.25-min SIP = 0 psi.

Set Halliburton 5 1/2" EZ-Drill retainer at 848'. Cemented casing leak (879' to 944), with a total of 956 sx of cement slurry, consisting of (1) 300 sx of API Class "C" cement, containing 0.5% Halad 322, (2) 336 sx of API Class "C" cement, containing 2% $CaCl_2$, 3 lb/sx Gilsonite, and 0.25 lb/sx Flocele, (3) 220 sx of Thixotropic cement containing 10% Cal Seal, and (4) 100 sx of API Class "C" Neat cement. Pulled 2 3/8" O.D. tubing.

Pressured 5 1/2" O.D. casing, from 0' to 848', to 1000 psi. Tied pump truck to 7 5/8" x 5 1/2" casing annulus. Cemented down 7 5/8" x 5 1/2" casing annulus, with 50 sx of API Class "C" cement containing 3% $CaCl_2$, 3 lb/sx Gilsonite, and 0.25 lb/sx Flocele, followed by 220 sx of Thixotropic cement containing 10% Cal Seal. Obtained cement returns back to surface, on outside of 13 3/8" O.D. casing.

Closed 7 5/8" O.D. casing valve. Tied pump truck to 13 3/8" O.D. casing. Cemented down 13 3/8" O.D. casing with 200 sx of API Class "C" cement containing 3% $CaCl_2$ followed by 110 sx of Thixotropic cement containing 10% Cal Seal. Observed cement returns back to surface, on outside of 13 3/8" O.D. casing. Continued cementing down 13 3/8" O.D. casing until 54" O.D. corrugated steel cellar can was full of cement.

Disconnected pump truck from 13 3/8" O.D. casing. WOC for 2.25 hrs. Tied pump truck to 7 5/8" O.D. casing. Attempted to pump cement down 7 5/8" O.D. casing. Pressure immediately climbed to 2500 psi.

Ran bottom-hole drilling assembly consisting of 4 3/4" bit and (8) 3 1/2" O.D. drill collars. Drilled 5 1/2" cementing retainer at 848', and cement below retainer. Fell out of hard cement, at 952'.

Moved well service unit to H.M. Britt No. 14 well, to replace corroded and worn tubing, and to install 228-213-86 pumping unit.

Moved well service unit back onto well, on 7-3-01. Pressure tested 5 1/2" O.D. casing, from 0' to 3390', to 2000 psi. Pressure held okay.

Hooked up reverse unit. Drilled 5 1/2" CIBP, at 3390'. After slips relaxed, pushed 5 1/2" CIBP to 3676' RKB. Pulled bottom-hole drilling assembly.

Rigged up Schlumberger. Logged well with DS-CNL-GR-CCL log and VDCBL-GR-CCL log. Found static fluid level at 1280'.

Ran 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP. Set 5 1/2" Model "C" RBP at 3429'. Set 5 1/2" Model "C" packer at 3397'. Loaded 5 1/2" O.D. casing, with 2% KCL water. Retested 5 1/2" O.D. casing, from 0' to 3397', to 2000 psi. Pressure dropped to 1500 psi, in 45 seconds.

Raised 5 1/2" Model "C" packer, to 3358'. Pressure tested 5 1/2" O.D. casing, from 3358' to 3429', to 3000 psi. Pressure held okay.

Lowered 5 1/2" Model "C" RBP to 3670'. Spotted 500 gal of 15% NEFE acid across and above Eunice-Monument perfs, from 3452' to 3670'. Acidized Eunice-Monument perfs, from 3452' to 3670', with an additional 1500 gal of 15% NEFE acid. Pulled 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP.

Rigged up wireline truck. Set Baker Model K-1 retainer, at 3448'. Ran 2 3/8" O.D. tubing and cementing stinger.

Squeeze cemented Eunice-Monument perfs, from 3452' to 3675', to a final pressure of 4726 psi, with 454 bbls of cement slurry consisting of (1) 1531 sx of API Class "C" Neat cement, (2) 200 sx of API Class "C" cement, containing 2% $CaCl_2$, 3 lb/sx Gilsonite, and 0.25 lb/sx Flocele, and (3) 200 sx of API Class "C" cement containing 3% $CaCl_2$, 3 lb/sx Gilsonite, and 0.25 lb/sx Flocele. Back washed 14 bbls of cement from tubing. Pulled 2 3/8" O.D. tubing.

Rigged up wireline truck. Perforated 5 1/2" O.D. casing, with (8) 0.38" x 19" squeeze holes, with one shot each at:

3275	3364
3279	3368
3283	3372
3338	
3342	

Ran 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP. Spotted 200 gal of 15% MCA acid across and above squeeze perfs. Acidized squeeze perfs with an additional 2200 gal of 15% MCA acid. Performed injectivity test into squeeze perfs, at 2.5 BPM, at 1500 psi.

Pulled 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP.

Ran 2 7/8" O.D., 6.5 lb/ft, N-80 work string and 5 1/2" Model "C" packer. Set 5 1/2" Model "C" packer, at 3103'. Cemented squeeze perfs, from 3275' to 3372', to a final pressure of 2987 psi, with 506 bbls of cement slurry consisting of (1) 1725 sx of API Class "C" Neat cement, (2) 200 sx of API Class "C" cement containing 2% $CaCl_2$, 3 lbs/ sx Gilsonite, and 0.25 lbs/sx Flocele, and (3) 200 sx of API Class "C" cement containing 3% $CaCl_2$, 3 lbs/sx Gilsonite, and 0.25 lbs/sx Flocele.

Raised 5 1/2" Model "C" packer. Isolated 5 1/2" O.D. casing leak, between 910' and 943'. Pressure tested 5 1/2" O.D. casing, from 0' to 910', to 3000 psi. Pressure held okay.

Pressure tested 5 1/2" O.D. casing, from 943' to 3172', to 3000 psi. Pressure held okay.

Pressure tested leak, from 910' to 943', to 2000 psi. Pressure dropped to 800 psi, in two minutes.

Acidized leak with 300 gal of 15% NEFE acid. Performed injectivity test into leak, at 3.0 BPM, at 1750 psi. ISIP = 800 psi. 5-min SIP = 800 psi.

Retested 5 1/2" O.D. casing, from 0' to 910', to 3000 psi. Pressure held okay. Pulled 2 7/8" O.D. work string and 5 1/2" Model "C" packer.

Squeeze cemented leak, from 910' to 943', to a final squeeze pressure of 3025 psi, by pumping down 5 1/2" O.D. casing, with 355 bbls of cement slurry, consisting of 775 sx of API Class "C" Neat cement, followed by 725 sx of API Class "C" cement containing 3% $CaCl_2$, 3 lbs/sx Gilsonite, and 0.5 lbs/sx Flocele.

Ran bottom-hole drilling assembly consisting of 4 3/4" bit and (8) 3 1/2" O.D. drill collars. Tagged top of cement, at 408'. Drilled 537' of cement, in 18.50 hrs (29.0'/hr). Fell out of cement at 940'. Pressure tested repaired casing, to 3000 psi. Pressure held okay.

Lowered bottom-hole drilling assembly. Drilled cement, from 3142' to 3448', in 8.616 hrs (35.5'/hr). Pressure tested squeeze perfs, from 3272' to 3375', to 2000 psi. Pressure held okay.

Rigged up wireline truck. Perforated Lower Queen interval, with (16) 0.38" x 19" holes, with one shot each at:

3185	3205	3223	3250
3193	3207	3226	
3197	3209	3230	
3199	3213	3240	
3203	3216	3247	

Ran 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP. Spotted 300 gal of acid across and above perfs, from 3185' to 3247'. Acidized Penrose perfs, from 3185' to 3247', with an additional 2640 gal (total of 2940 gal) of 15% MCA acid, at an average treating rate of 3.8 BPM, and average treating pressure of 2250 psi. ISIP = 735 psi. 5-min SIP = 0 psi.

Pulled 2 3/8" O.D. tubing and 5 1/2" Model "C" packer. Rigged up wireline truck. Perforated with an additional (16) 0.38" x 19" holes, with one shot each at:

2962	3104	3151	3232
2964	3116	3153	
3049	3120	3157	
3090	3140	3159	
3100	3145	3183	

Ran 2 3/8" O.D. tubing and 5 1/2" Model "C" packer. Raised 5 1/2" Model "C" RBP, to 3171'. Spotted 500 gal of 15% MCA acid across perfs, from 2962' to 3159'. Acidized perfs, from 2962' to 3159', with an additional 2360 gal (total of 2860 gal) of 15% MCA acid, and 17 ball sealers, at an average treating rate of 3.7 BPM. Max Pressure = 3000 psi (at ballout). ISIP = 1671 psi. 15-min SIP = 387 psi.

Pulled 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP.

Ran and landed 2 3/8" O.D. tubing, at 3404'. Ran 2" x 1 1/4" x 12' RHAC insert pump and 3/4"

Axelson S-87 API Class "KD" rod string. Commenced cleaning up and testing well, at 1:00 p.m., CDT, 7-13-01, at 8.5 x 64 x 1 1/4.

Performed well test:

Date:		9-13-01
Producing Interval:		2962' to 3250'
Gas Rate:		TSTM
Water Rate:		71.4 BPD
CP	=	0.2 psi
Pump Time	=	99%

Note: Probable water source is water crossflow, below 5 1/2" CIBP, in un-squeezed Eumont (Queen) perforated interval, in adjacent and previously plugged and abandoned Britt "A-6" No. 4 well.

Moved in and rigged up well service unit, on 9-13-01. Pulled rods and tubing.

Ran 2 3/8" O.D. tubing and 5 1/2" Model "C" packer. Set 5 1/2" Model "C" packer, at 2812'. Pressure tested 2 3/8" O.D. tubing, to 4800 psi. Loaded 5 1/2" O.D. casing. Pressured 5 1/2" O.D. casing to 800 psi.

Squeeze cemented Eumont perfs, from 2962' to 3250', with 455 sx of API Class "C" Neat cement. Final displacement rate was 1.3 BPM, at 4033 psi. Stage squeezed to a final pressure of 4100 psi. Back washed cement from tubing.

Raised and reset 5 1/2" Model "C" packer, at 2555'. Pressured cement to 3000 psi. WOC over weekend.

Ran 2 3/8" O.D. tubing and bottom-hole drilling assembly consisting of 4 3/4" bit and (6) 3 1/2" O.D. drill collars. Drilled out cement, from 2809' to 3220' (411'), in 12.7 hrs (32.4'/hr). Pressure tested squeeze, from 2962' to 3200', to 2100 psi. Pressure held okay.

Hooked up air units. Unloaded water from hole. Pulled 2 3/8" O.D. tubing and bottom-hole assembly.

Rigged up wireline truck. Perforated Upper Eumont, with (37) 0.38" x 19" holes, from 2307' to 2966'.

Ran 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, 5 1/2" Model "C" RBP. Acidized perfs, from 2307' to 2966', in 3 stages, with a total of 7900 gal of 15% MCA acid.

Interval (ft)	No. of holes	Acid Volume (gal)	No of Balls	Rate (BPM)	Tp_{mx} (psi)	ISIP (psi)
2917 to 2966	8	2300	13	2.9	3000	1844
2510 to 2750	19	3500	24	3.3	3640	1655
2307 to 2442	10	2100	14	3.0	3000	

Balled off all three stages.

Pulled 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP.

Ran 2 3/8" O.D. tubing, to 3201'. Hooked up air units. Unloaded fluid from hole. Ran 2" x 1 1/4" x 12' RHAC insert pump and 3/4" Axelson S-87 API Class "KD" rod string. Commenced pumping and cleaning up well, at 7:00 p.m., CDT, 9-20-01.

Observed the following well performance:

Date:	10-3-01
Test Period:	24 hrs
Gas Rate:	26 MCFPD
Water Rate:	0.6 BPD
Orifice Plate:	0.250"
CP:	11.2 psi
OP:	11.2 psi

Moved in and rigged up well service unit, on 10-3-01. Pulled rods and tubing. Rigged up wireline truck. Perforated Upper Eumont, from 2333' to 2848', with eleven (11) 0.44" x 23" holes:

2333	2674	2823
2500	2758	2844
2507	2774	2848
2664	2777	

Ran 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP. Set 5 1/2" Model "C" RBP, at 2880'. Spotted 800 gal of 15% MCA acid, across and above Upper Eumont perfs, from

2303' to 2848'. Set 5 1/2" Model "C" packer at 2247'. Acidized perfs, from 2307' to 2848', with an additional 7200 gal (total of 8000 gal) of 15% MCA acid and 50 ball sealers, at 4.2 BPM. Tp_{mx} = 3520 psi (at ballout). ISIP = 1642 psi. 15-min SIP = 1437 psi.

Pulled 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP.

Ran 2 3/8" O.D. tubing, to 3202'. Hooked up air units. Unloaded 110 bbls of load water from hole.

Ran 2" x 1 1/4" x 12' RHAC insert pump and 3/4" Axelson S-87 API Class "KD" rod string. Commenced pumping and cleaning up well, at 9:00 p.m., CDT, 10-4-01.

Performed well test:

Date:	10-8-01
Producing Interval:	2307' to 2966'
Test Period:	21.5 hrs
Gas Production:	89.6 MCF
Water Production:	3.5 bbls
Gas Rate:	100 MCFPD
Water Rate:	3.9 BPD
Orifice Plate:	0.375"
CP:	25.5 psig
OP:	25.5 psig

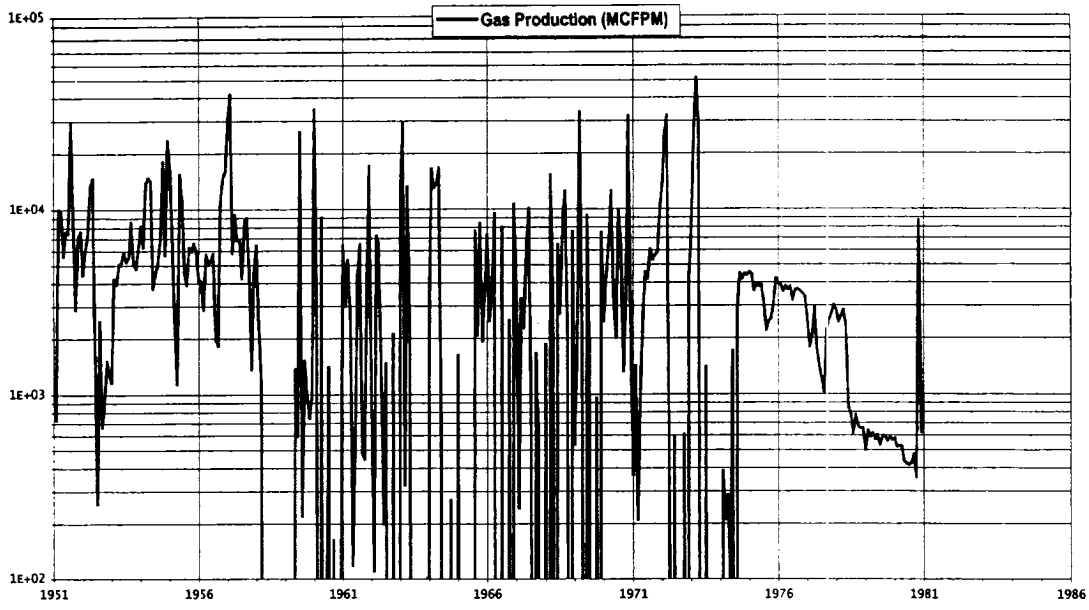
In compliance with the BLM's 7-24-00 notice, previously abandoned H.M. Britt No. 2 wellbore has now been returned to beneficial use, as a replacement, for the adjacent Britt "A-6" No. 4 Upper Eumont bradenhead well, that was abandoned by Conoco (predecessor operator), in 1980.

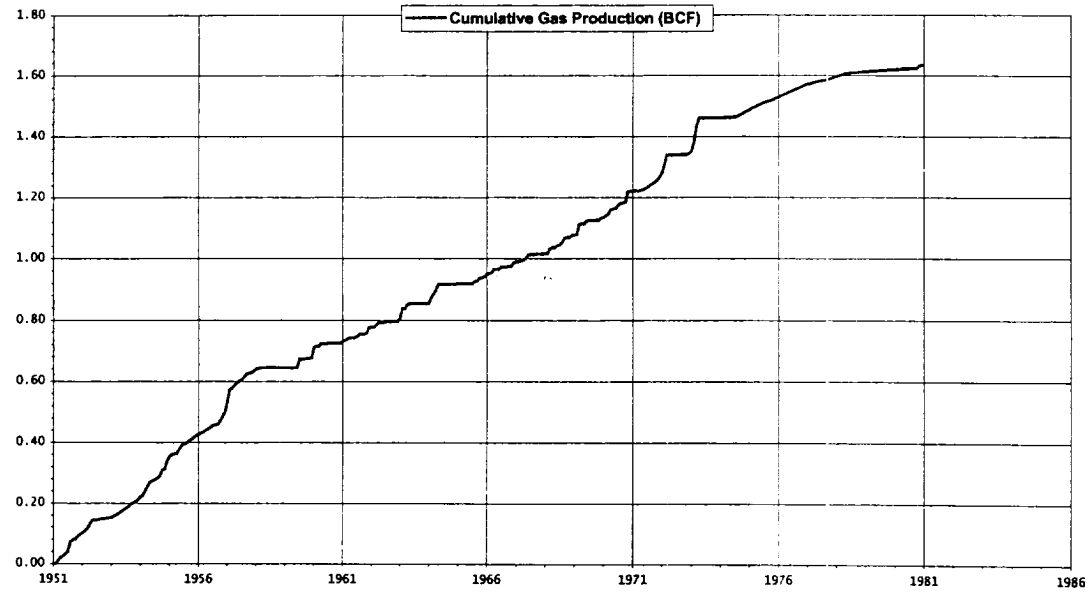
Britt A-6 #4

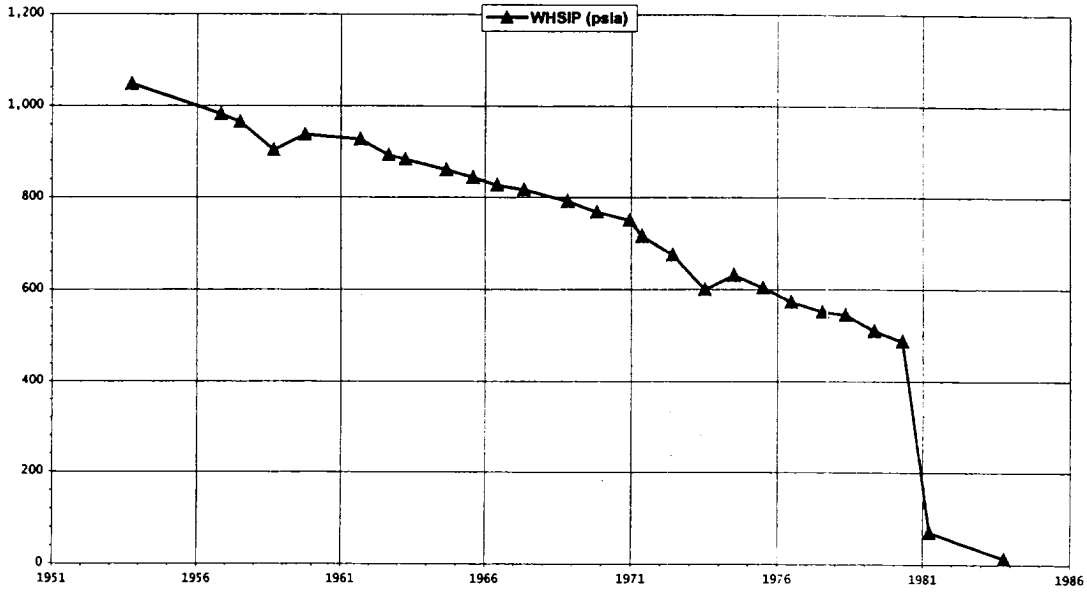
Upper-Eumont Braden-Head Completion

L-6-20S-37E

Conoco







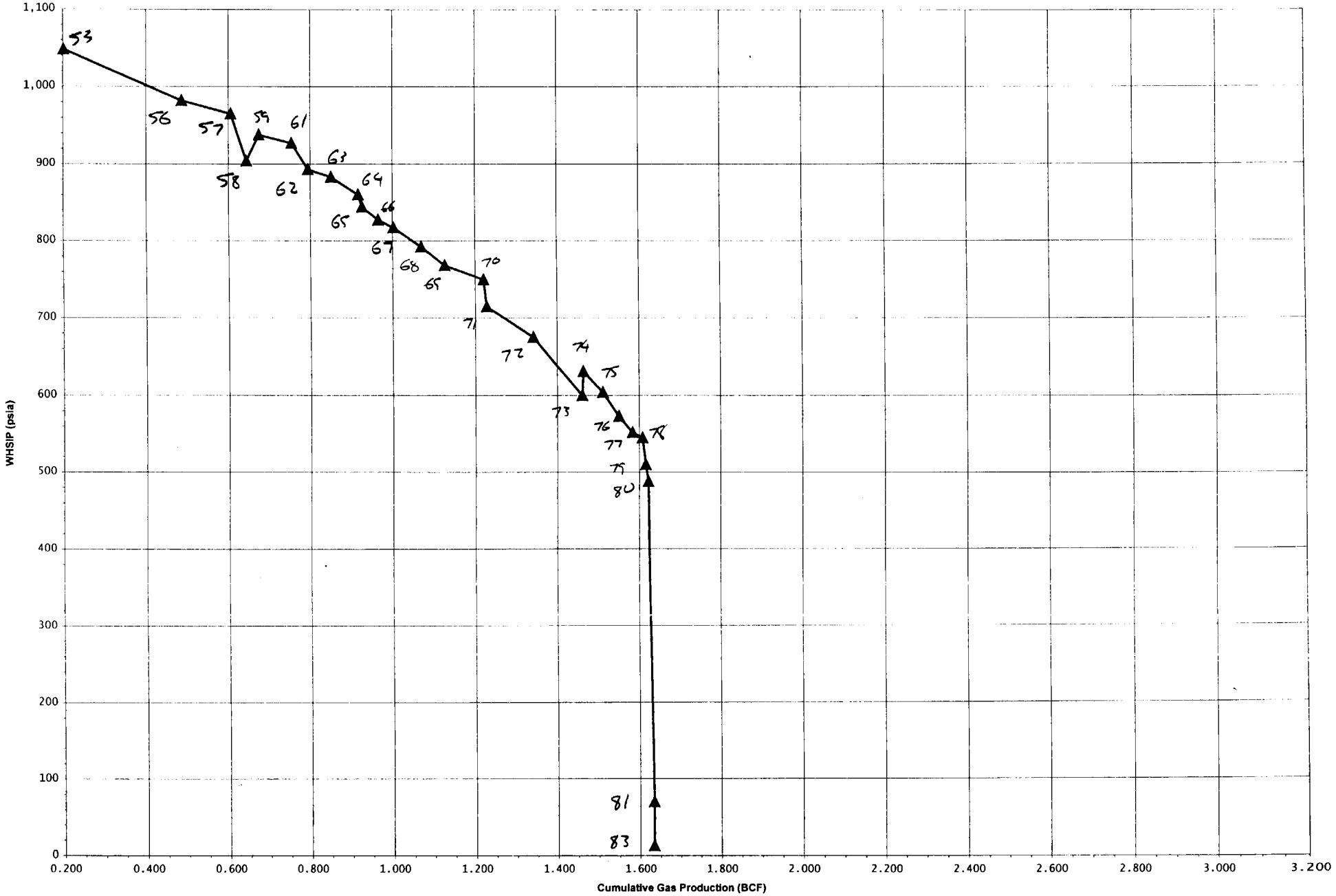
11/80: 1.634 BCF 0.0 MBO

Britt A-6 #4

Upper-Eumont Braden-Head Completion

L-6-20S-37E

Conoco



10/83: 1.634 BCF