

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL:		OIL WELL <input type="checkbox"/>	GAS WELL <input type="checkbox"/>	DRY <input checked="" type="checkbox"/>	Other _____		
b. TYPE OF COMPLETION:		NEW WELL <input type="checkbox"/>	WORK OVER <input type="checkbox"/>	DEEP-EN <input type="checkbox"/>	PLUG BACK <input type="checkbox"/>	DIFF. RESVR. <input type="checkbox"/>	Other _____
2. NAME OF OPERATOR						5. LEASE DESIGNATION AND SERIAL NO.	
Consolidated Oil & Gas Inc.						6. IF INDIAN, ALLEGE OR TRIBE NAME	
3. ADDRESS OF OPERATOR						7. UNIT AGREEMENT NAME	
P.O. Box 2038, Farmington, New Mexico						8. FARM OR LEASE NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*						9. WELL NO.	
At surface 790' from the North line & 790' from the East line of Section 31, Twn. 25 North Range 9 West NMPH.						10. FIELD AND POOL, OR WILDCAT	
At top prod. interval reported below						11. SEC., T. R., M., OR BLOCK AND SURVEY OR AREA	
At total depth						12. COUNTY OR PARISH	
14. PERMIT NO.						13. STATE	
DATE ISSUED						San Juan New Mexico	
15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, REB, RT, GR, ETC.)*		19. ELEV. CASINGHEAD		
8-13-64	8-26-64	Dry Hole	6792 G.L. 6804 K.B.		6793		
20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS		
6499 K.B.	6452		→	0 to T.D.			
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*						25. WAS DIRECTIONAL SURVEY MADE	
6424-6434 4 holes per foot						No	
26. TYPE ELECTRIC AND OTHER LOGS RUN						27. WAS WELL CORRED	
Induction-Electrical, Gamma Ray- Acoustic						No	
28. CASING RECORD (Report all strings set in well)							
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD		AMOUNT PULLED	
8 5/8	24#	254	12 1/4"	150 Sacks		None	
4 1/2	11.60#	6498	7 7/8"	260 sacks 50-50 Poz-Mix with 4% gal.		2762	
29. LINER RECORD				30. TUBING RECORD			
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
31. PERFORATION RECORD (Interval, size and number)				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
6424-6434 4 holes per foot				DEPTH INTERVAL (MD)			
				6424-6434			
				AMOUNT AND KIND OF MATERIAL USED			
				60,000 lbs. and 69,000 gallons of water			
				See attached drilling and completion report.			
33.* PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
						shut-in	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
			→				
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
		→					
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)						TEST WITNESSED BY	
35. LIST OF ATTACHMENTS							
Induction Electric log, Acoustic Velocity log and Drilling & Completion History							
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records							
SIGNED		TITLE				DATE	
Thomas M. Seely		Area Superintendent				10-6-64	

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. **Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES			38. GEOLOGIC MARKERS				
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP	TRUN VERT. DEPTH

DRILLING AND COMPLETION HISTORY
CONSOLIDATED OIL & GAS, INC.
HUERFANO NO. 2-31
San Juan County, New Mexico
September 9, 1964

LOCATION: 790' FNL, 790' FEL, Section 31
T25N-R9W, N.M.P.M.

ELEVATIONS: 6792' GL, 6804' KB

SPUD: August 13, 1964

DRILLING COMPLETED: August 26, 1964
WELL COMPLETED: September 7, 1964

TOTAL DEPTH: 6485' Driller's (6499' Logger's)

CASING: Surface 8 5/8" 24# set at 254' with 150 sx.
regular 2% CaCl

Production 4 1/2" 11.6# set at 6498' cemented
with 130 sx. Class C and 130 sx.
Diamix A (50/50) with 4% gel.

LOGS: Welx Induction Electric & Fracture
Finder Micro-Seismogram

CORES & DRILLSTEM TESTS: None

FORMATIONS TOPS: (Log)

Pictured Cliffs	1854'	(+4950)
Point Lookout	4298'	(+2506)
Gallup	5338'	(+1466)
Greenhorn	6264'	(+ 540)
Graneros, Shale	6328'	(+ 476)
Graneros, Sand	6386'	(+ 418)
Dakota	6406'	(+ 398)

COMPLETION ATTEMPT NO. 1

PRODUCING PERFORATIONS: 6414' - 6420'
6424' - 6434'

TREATMENT: Sand water frac with 60,000 lbs. 20-40
sand and 74,970 gal. water.

COMPLETION ATTEMPT NO. 2

SQUEEZE CEMENTING
OF PERFORATIONS:

25 sx. Class C - 2000# TP, 1300# CP
35 sx. neat - 2100# TP, 1700# CP
30 sx. regular - 2300# TP, 1900# CP

REPERFORATIONS:

6418' - 6420'
6415' - 6419'

RETREATMENT:

Sand water fraced with 30,000 lbs. 20-40
sand and 33,852 gal. water.

Plugged and Abandoned 9/7/64.

WELL: HUERFANO 2
790' FNL, 790' FEL, Section 31-T25N-R9W
FIELD: Basin Dakota
COUNTY: San Juan STATE: New Mexico
ELEVATIONS: GL
 KB

8/13/64

Drilled 260' of 12 1/4" hole. Ran 8 joints of 8 5/8" 24# casing set at 254' KB. Cemented with 150 sx. regular with 2% CaCl. Plugged down at 7:15 p.m. Present operation, preparing to drill.

8/14/64

Depth 2410'. Drilled 2150' of sand and shale. Drilling with water. Dev. 1 1/4° at 500', 1/2° at 1050', 3/4° at 1960'. Present operation, drilling with Bit 3.

8/15/64

Depth 3068'. Drilled 658'. Drilling with water. Dev. 3/4° at 2460'. Bit No. 4. Present operation, down 5 hours. Rotary table being repaired. Should be in operation in 4 to 6 hours.

8/16/64

Depth 3395'. Drilled 327', sand and shale. Dev. 1 1/4° at 3000'. Present operation, drilling with Bit 6.

8/17/64

Depth 3980'. Drilled 585' of sand and shale. Drilling with water. Present operation, drilling with Bit 7.

8/18/64

Depth 4433'. Drilled 453' of sand and shale. Stuck at 1300', coming out of hole, broke circulation, worked free, mudded up. Mud 9.4. Vis. 43. Dev. 1 1/4° at 4050'. Present operation, drilling with Bit 8.

WELL:

HUERFANO NO. 2

8/19/64

Depth 4780'. Drilled 347' of sand and shale. Mud 9.4. Vis. 47.
Water loss 10. Present operation, drilling with Bit 10.

8/20/64

Depth 5115'. Drilled 335' of sand and shale. Drilling with Bit 11.
Mud 9.3. Vis. 48. Water loss 8. Dev. $1\frac{1}{2}^{\circ}$ with 5050'.

8/21/64

Depth 5340'. Drilled 225' of sand and shale. Present operation,
tripping for Bit 12. Mud 9.3. Vis. 60. Water loss 7.2. 4% oil.

8/22/64

Depth 5615'. Drilled 275' of sand and shale. Present operation,
drilling with Bit 13. Mud 9.2. Vis. 58. Water loss 7.6.

8/23/64

Depth 5940'. Drilled 323' of sand and shale. Mud 9.4. Vis. 60.
Water loss 8.2. Oil 6%. Dev. $3/4^{\circ}$ at 5800'. Present operation,
drilling with Bit 14.

8/24/64

Depth 6315'. Drilled 375' of sand and shale. Mud 9.4. Vis. 57.
Water loss 7.0. Present operation, making trip for Bit 16.

8/25/64

Depth 6445'. Drilled 130' of sand and shale. Mud 9.6. Vis. 66.
Water loss 8.2. Present operation, tripping for Bit 18.

8/26/64

Drilled 40' of sand and shale. TD 6485'. Rigged up Welex, ran
induction, electrical and gamma ray neutron and acoustic logs.
Present operation, laying down drill pipe.

WELL:

HUERFANO NO. 2

8/27/64

Ran 206 joints of 4 1/2" 11.6# casing for 6492.76', set at 6497.76' KB. Float collar at 6472.90' KB. Scratchers and centralizers on bottom 105' of pipe. Pretreated 200 bbls. mud with 0.06 gal./bbl. Hydrazine and 0.1 gal./bbl. Bactrine. Preflushed with 50 sx. GP100 cemented with 130 sx. Class C and 130 sx. Diamix A (50/50) with 4% gel. Reciprocated pipe while pumping. Plug down at 5:20 p.m. Bumped plug with 1900 psi, float collar with wire line at 6470' KB. Present operation, preparing to pick up 1 1/2" tubing.

8/28/64

Ran total of 200 joints of 1 1/2" upset tubing and tagged bottom at 6452' KB. Pressured up to 3000#, held OK. Spotted 500 gal. of regular 15% acid, pulled out, rigged up Welex. Ran Gamma Ray, collar and induction electric logs. Perforated 6 per foot from 6414'-6420' and 4 per foot from 6424'-6434'. Broke down 200 psi, put acid away in 3 stages pumped in 1300 psi 4 BPM, back to 700 psi in 15 minutes. Waited 1 1/2 hours for Western Co. truck. Treated with 60,000 lbs. 20-40 sand and 69,090 gal. water. Average treating pressure 3000 psi, average injection rate 30.4 BPM. Job complete 11:40 p.m. 8/27. Opened up well, flowed back. Present operation, well making 3" stream of water, logging off at 2032'. Preparing to pull back up and blow down again.

Broke	2000 psi	Initial IR	30 BPM
Initial TP	2800 psi	Max. IR	32 BPM
Max. TP	3300 psi	Min. IR	28 BPM
Min. TP	2800 psi	Final IR	28 BPM
Final TP	3300 psi	Avg. IR	30.4 BPM
Avg. TP	3000 psi	Sand	60,000 lbs. 20-40
Initial SIP	2250 psi	Total Fluid	74,970 gal.
5 min. SIP	2000 psi	Treat. fluid	69,090 gal.
15 min. SIP	1800 psi	Additives	7 lb/1000 gal. J-2
Hyd. HP	2310	Flush	None
Job complete 11:40 p.m.		Balls	60 in 76 holes

8/29/64

Came back up the hole. Blew down to 2303', logged off. Back down to 1728' @ 8:00 p.m. Blew well for one hour, making 2 to 2 1/2" stream of water with no change. Worked down to 2995'. Water started getting cloudy @ 12:30. Water continued to get darker. At 2:00 a.m. started making oil in water emulsion. Appeared to be dead oil, however, this

WELL:

HUERFANO NO. 2

8/29/64 Cont'd.

burn after settling out. Water is now milky brown. After setting for 30 minutes has oil film on top. Present operation, blowing @ 3750' KB. Making 2" stream of water.

8/30/64

Laid down 1 1/2" EUE tubing. Picked up 2 3/8" EUE. Came out of hole, started blowing down. Present operation, blowing at 3100'. No change in well conditions. Blew around at 930'. Running 1 stand at a time.

8/31/64

Blew down 3658' KB. Last stand took 16 minutes to come around. Well trying to log off. Ran tubing down to 6434', tagged sand, started circulating and circulated 150 bbls. After getting sand back, sand did not stop, formation giving up sand. Rigged up Lane Wells, ran 1 3/4" logging tool and 2 3/8" tubing. Logger's TD 6442'. Ran radioactive survey, survey showed most of fluid going below perforations.

9/1/64

Present operation, coming out of hole with tubing to set cement retainer.

9/2/64

Pulled tubing. Rigged up Welex. Ran perforating collar log. Found perforations @ 6414' to 6420' and 6424' to 6434'. Set Baker CI cement retainer at 6422.5' KB. Fluid level at 435' KB. Went in blowing down. Water volume decreased approximately 30%. Blew down to 2600'. Made small amount of dead oil, then clear water. At 3350' well started making emulsion. Making 1 to 1 1/2" stream of cold water. No gas. Present operation, preparing to squeeze thru retainer at 6422'.

9/3/64

Went in hole, stung in retriever at 6422' KB. Had complete circulation between perforations, pumped in at 6 BPM at 1500#. Mixed 25 sx. Class C cement, had 2000# tubing pressure, 1300# casing pressure, when cement hit. 2300# tubing pressure, 1550# casing pressure when cement was pumped away. Cleared retainer by 1/2 bbls. and upper perforations by 1/2 bbl. Job complete at 11:22 a.m. Waited on cement 6 hours, pumped in 2 3/4 BPM at 1750#. Mixed 35 sx. neat cement, 2100#

WELL:

HUERFANO NO. 2

9/3/64 Cont'd.

tubing pressure, 1700# casing pressure when cement hit. 2450# tubing pressure, 1950# casing pressure when cement pumped away. Instant shut in pressure 1900# tubing, 1700# casing. Cleared tubing by 1/2 bbl. casing by 1/4 bbl. Picked up and reversed out. Had approximately 1/4 bbl. cement colored water. Job complete 6:00 p.m. WOC 6 hours. Pumped in 2 BPM at 2200#. Mixed 30 sx. cement, 2300# tubing pressure, 1900# casing pressure when cement hit. Put 15 sx. away, bled off to 800# in 15 minutes. Put away 1/4 bbl. at 1500#, bled off to 900# in five minutes. Put away 1/4 bbl. cement at 1600#, bled off to 1200# in five minutes. Started pumping, went to 2800# tubing pressure, 2300# casing pressure. Bled off, went to 3000#, did not move. Picked up 15' reversed out excess cement, came out of hole with tubing. Job complete 1:10 a.m. Present operation, WOC.

9/4/64

WOC 12 hours. Top of cement at 6408'. Drilled firm cement. Cleaned out to retainer at 6422' KB and circulated 1 1/2 hours. Blew down to 6422'. Present operation, preparing to perforate, well was dry of water before starting out of hole.

9/5/64

Put 700' of fluid in hole. Rigged up Lane Wells. Perf. 2'/foot with 50 gram charges from 6418'-6420' (Welex Gamma Ray Acoustic) Pumped in 500 bbls. of acid and loaded hole. Dowell pressured up to 2750 and put away water. Staged acid 2 bbls./stage waiting 15 min. between stages. Well stopped taking fluid after putting acid away. Went in hole with tubing. Spotted 500 gal. regular 15% acid. Pushed steel retainer (3 1/4" OD, 3" long with 1 7/16" hole in center) to bottom. Left when perforating. Came out. Rigged up Lane Wells. Perforated 6'/foot from 6415'-6419'. Put acid away in 4 - 15 minutes stages. Pumped in at 2000 psi, bled back to 500 psi on last stage. Treated with 30,000 lbs. 20-40 sand, 33,852 gal. water, 2.5 lb./1000 gal J-2. Avg. treating pressure 3100 psi, avg. injection rate 26 BPM. Job complete @ 5:20 a.m.

All pumps	3250 psi	Initial IR	24 BPM
Initial TP	3300 psi	Max. IR	29 BPM
Max. TP	3300 psi	Min. IR	18 BPM
Min. TP	2750 psi	Final IR	25 BPM
Avg. TP	3100 psi	Avg. IR	25.5 BPM
Instant SIP	2300 psi	Sand	30,000 lb. 20-40

WELL:

HUERFANO NO. 2

9/5/64 Cont'd.

5 min. SIP	2100 psi	Total fluid	38,430 Gal.
15 min. SIP	1850 psi	Treat. fluid	33,850 Gal.
Hyd. HP	1937	Additives	2.5 lb./1000 gal. J-2
Job complete 5:20 a.m.		Balls	None

9/6/64

Went in hole blowing down. Well making 2 to 2 1/2" stream of water. logging off at 3300 to 3400 ft. Blowing at 3550' this a.m. No change in well conditions. Blowing for 24 hours. Present operation, preparing to plug and abandon.

9/7/64

Pulled out, removed bit, went in hole. Spotted 30 sx. plug from 6300' to TD, welded on to 4 1/2" casing. Could not get slips loose, cut 8 5/8" at 4 1/2, weld back on to 4 1/2". Rigged up McCullough, found free point at 1200', worked pipe until pipe free at 2800', cut at 2794' KB. Laid down 87 joints of 4 1/2" casing, ran tubing in and spotted 50 sx. plug from 2620' to 2800' and 50 sx. plug from 1120 to 1300'. Laid down tubing, put in surface plug and marker.

9/8/64

Moving off rotary rig.