

**US ROCKIES REGION**  
**Operation Summary Report**

Well: LUDWIG 2-5 2				Spud date: 5/4/1990					
Project: COLORADO-WELD-NAD83-UTM13				Site: LUDWIG 2-5 2				Rig name no.: LEED 721/721	
Event: ABANDONMENT				Start date: 12/27/2016			End date: 1/26/2017		
Active datum: RKB @4,944.00usft (above Mean Sea Level)				UWI: 0/3/N/65/W/5/0/NWNW/6/0/N/1000/W/0/-1000/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation	
11/1/2016	10:00 - 11:00	1.00	ABANDP	53	B	P		FORM 17 TEST	
11/7/2016	7:00 - 8:00	1.00	ABANDP	53	B	P		GAS SAMPLE	
12/16/2016	-								
12/19/2016	-								
12/27/2016	12:00 - 13:30	1.50	ABANDP	30	A	P		MIEU LEED 721	
	12:00 - 12:00	0.00	ABANDP	52	I	P		TBG/CSG=600 SC=150	
	13:30 - 14:30	1.00	ABANDP	30	E	P		CONTROL WELL W/ CIRCULATION	
	14:30 - 15:00	0.50	ABANDP	30	F	P		NDWH NUBOP W/ FUNCTION TESTED 2.375" PIPE RAMS AND BLIND RAMS	
	15:00 - 17:00	2.00	ABANDP	31	I	P		TOOH W/ PROD TBG STANDING BACK IN DERRICK LWAVING FOUR ROWS FOR A KILL STRING	
	17:00 - 17:30	0.50	ABANDP	30	G	P		CREW TO YARD	
12/28/2016	6:00 - 6:30	0.50	ABANDP	30	G	P		CREW TO LOC	
	6:30 - 7:00	0.50	ABANDP	48	B	P		HELD SAFETY MEETING START EQUIP	
	7:00 - 7:00	0.00	ABANDP	52	I	P		TBG/CSG=20 SC=0 OPEN TBG/CSG TO TANK BLEW DOWN IN 3 MIN	
	7:00 - 8:00	1.00	ABANDP	31	I	P		TOOH W/ REMAINING TBG 237 JNTS TOTAL	
	8:00 - 9:00	1.00	ABANDP	34	I	P		PU AND RIH W/ CIBP SET @ 7720' POOH W/ SETTING TOOL	
	9:00 - 9:30	0.50	ABANDP	31	H	P		LAOD CSG W/ RIG PUMP SLOWLY WHILE TRIPPING OUT W/ SETTING TOOL AND TIH W/ LOGGING TOOLS	
	9:30 - 13:00	3.50	ABANDP	41	A	P		TIH W/ LOGGING TOOL TO 7720 FIRST TOOL QUIT WORKING POOH TIH W/ SECOND TOOL RUN CBL FROM 7720-SURFACE TOC=6325'	
	13:00 - 14:00	1.00	ABANDP	34	D	P		PU AN RIH W/ BUMP BAILER DUMP 2 SK CEMENT ON CIBP @ 7720' POOH W/ BAILER	
	14:00 - 15:00	1.00	ABANDP	34	I	P		PU RIH W/ CIBP SET @ 7038' POOH W/ SETTING TOOL	
	15:00 - 16:00	1.00	ABANDP	31	I	P		ROUND TRIP 20 STANDS OF TBG TO DROP FLUID LEVEL SECURE WELL W/ SHUT AND LOCKED BLIND RAMS	
	16:00 - 16:30	0.50	ABANDP	30	I	P		WINTERIZE RIG AND DRAIN EQUIP	
	16:30 - 17:00	0.50	ABANDP	30	G	P		CREW TO YARD	
12/29/2016	6:00 - 6:30	0.50	ABANDP	30	G	P		CREW TO LOC	
	6:30 - 7:00	0.50	ABANDP	48	B	P		HELD SAFETY MEETING START EQUIP	
	7:00 - 7:00	0.00	ABANDP	52	I	P		CSG=0 SC=50 PERFORM SOP ON SC	
	7:00 - 7:30	0.50	ABANDP	31	I	P		TIH W/ 20 JNTS TOOH LAYING DOWN 20 JNTS	
	7:30 - 11:30	4.00	ABANDP	31	I	P		TIH W/ 217 JNTS TO 7031' HYDROTESTING TBG TO 3000# ON TIH	
	11:30 - 14:30	3.00	ABANDP	31	H	P		C&CH W/ RIG PUMP AIR=2 BPM AIP=700 PSI FULL RETURNS	
	14:30 - 15:30	1.00	ABANDP	51	D	P		MIRU O-TEX PUMP NIOBRARA PLUG AS FOLLOWS: 5 BBLS, 25 SK (6.7 BBLS) 15.8 PPG, 1.52 YIELD, THERMAL 35 CEMENT, 25.5 BBLS FRESH WATER, AIR=2 BPM, AIP=400 PSI, ISIP=0	
	15:30 - 16:00	0.50	ABANDP	31	I	P		TOOH W/ 64 STANDS SECURE WELL W/ SHUT AND LOCKED PIPE RAMS.	

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Spud date: 5/4/1990

Project: COLORADO-WELD-NAD83-UTM13

Site: LUDWIG 2-5 2

Rig name no.: LEED 721/721

Event: ABANDONMENT

Start date: 12/27/2016

End date: 1/26/2017

Active datum: RKB @4,944.00usft (above Mean Sea Level)

UWI: 0/3/N/65/W/5/0/NWNW/6/0/N/1000/W/0/-1000/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
12/30/2016	16:00 - 16:30	0.50	ABANDP	30	I	P		DRAIN PUMP AND LINES
	16:30 - 17:00	0.50	ABANDP	30	G	P		CREW TO YARD
	6:30 - 7:00	0.50	ABANDP	30	G	P		CREW TO LOC
	7:00 - 7:30	0.50	ABANDP	48	B	P		HELD SAFETY MEETING START EQUIP
	7:30 - 9:00	1.50	ABANDP	31	I	P		TOOH LAYING DOWN 88 JNTS ON TRAILER
	7:30 - 7:30	0.00	ABANDP	52	I	P		TBG/CSG=0 SC=30 PEFORM SOP
	9:00 - 10:00	1.00	ABANDP	46	F	Z		WAIT ON ELINE TO ARRIVE HUNG UP ON ANOTHER LOCATION
	10:00 - 11:00	1.00	ABANDP	37	E	P		MIRU PIONEER RIH W/ 3.1.25" SQZ GUNS SHOOT HOLES @ 4690-4692, S 3 SPF, 120 PHASING, .50EH. PUH SHOOT SQZ HOLES @ 4140-4144", 3 SPF, 120 PHASING, .50 EH POOH W/ SPENT GUN
1/3/2017	11:00 - 12:00	1.00	ABANDP	30	I	S		WINTERIZE RIG AND PUMP DRAIN LINES HAUL OFF FLUIDS. UNABLE TO GET CEMENT FOR THE DAY
	12:00 - 12:30	0.50	ABANDP	30	G	P		CREW TO YARD
	6:00 - 6:30	0.50	ABANDP	30	G	P		CREW TO LOC
	6:30 - 7:00	0.50	ABANDP	48	B	P		HELD SAFETY MEETING START EQUIP
	7:00 - 7:00	0.00	ABANDP	52	I	P		CSG=300 SC=200 OPEN BOTH TO TANK BLEW DOWN
	7:00 - 8:30	1.50	ABANDP	31	I	P		PU AND TIH W/ CICR SET @ 4172' W/ 129 JNTS
	8:30 - 10:00	1.50	ABANDP	31	H	P		C&CH W/ RIG PUMP AIR=2 BPM, AIP=500 PSI GETTING FULL RETURNS NO GAS IN RETURNS AFTER FIST 20 MINS OF CIRCULATION
	10:00 - 12:15	2.25	ABANDP	46	F	Z		CONTINUE TO C&CH WHILE WAITING ON CEMENTERS TO ARRIVE, THEN PUMP WAS FROZEN HELP THAW W/ RIG HEATER ON LOC
	12:15 - 13:15	1.00	ABANDP	51	A	P		PUMP SUSSEX SQZ/PLUG AS FOLLOWS: 5 BBLS FRESH WATER, 10 BBLS SMS, 5 BBLS FRESH WATER, 333 SKS (88 BBLS) 15.8 PPG, 1.51 YIELD, "G" CEMENT, 13 BBLS FRESH WATER, AIR=2.4 BPM, AIP=750 PSI, ISIP=500 PSI STING OUT OF CICR ISIP=0
	13:15 - 14:00	0.75	ABANDP	31	I	P		TOOH W/ CICR STRINGER STANDING BACK 42 JNTS LD REMAINING TBG
1/4/2017	14:00 - 14:30	0.50	ABANDP	34	L	P		MIRU PIONEER WIRELINE RIH W/ CUTTER TO 1250' JET CUT CSG POOH W/ SPENT CUTTER
	14:30 - 15:30	1.00	ABANDP	30	F	P		NDBOP NDWH UNLAND PROD CSG @ 45000# HOLDING 12000# NU COMPANION FLANGE, NU P&A SPOOL, NUBOP W/ FUNCTION TESTED 4.5" PIPE RAMS AND BLIND RAMS. SECURE WELL W/ SHUT AND LOCKED PIPE RAMS, TIW VALVE AND NIGHT CAP
	15:30 - 16:00	0.50	ABANDP	30	I	P		DRAIN PUMP AND LINES
	16:00 - 16:30	0.50	ABANDP	30	G	P		CREW TO YARD
	6:00 - 6:30	0.50	ABANDP	30	G	P		CREW TO LOC
	6:30 - 6:45	0.25	ABANDP	48	B	P		HELD SAFETY MEETING
	6:45 - 7:30	0.75	ABANDP	30	I	P		START RIG, PUMP AND RIG HEATER LET WARM UP
	7:30 - 9:00	1.50	ABANDP	30	F	P		NDBOP NDWH SPEAR AND UNLAND PROD CSG @ 45000# PULL HOLDING 15000# NU COMPANION FLANGE, NU P&A SPOOL, NUBOP W/ FUNCTION TESTED 4.5" EQUIP
	7:30 - 7:30	0.00	ABANDP	52	I	P		CSG=80 SC=80 OPEN BOTH TO TANK HEAVY MUD FLOWING BACK THEN STOPPED ZERO PRESSURE

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Site: LUDWIG 2-5 2

Rig name no.: LEED 721/721

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UWI: 0/3/N/65/W/5/0/NWNW/6/0/N/1000/W/0/-1000/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	9:00 - 10:00	1.00	ABANDP	31	H	W		WELL KICKED OFF WORK TO GET FLUID MOVING 4 DEGREES PUMP AND RETURN LINES KEEP FREEZING UP
	10:00 - 11:30	1.50	ABANDP	31	H	P		CIRCULATE GAS FROM WELL BORE W/ CONVENTIONAL CIRCULATION AIR=2 BPM, AIP=200 PSI HEAVY MUD, AND GAS IN FIRST 40 MINS OF CIRCULATION THEN LIGHTER MUD AND NO GAS DURING THIS TIME SCHLUMBERGER CALLED AND CANCELLED THE CEMENT JOB FOR THE DAY (NOON WAS THE SCHEDULED AND CONFIRMED TIME)
	11:30 - 13:00	1.50	ABANDP	31	I	P		LD PROD CSG ON TRAILER (XX) JNTS
	13:00 - 13:30	0.50	ABANDP	31	I	P		TIH W/ 1354' OF 2.375" PROD TBG SHUT AND LOCK 2.375" PIPE RAMS, INSTALL TIW VALVE W/ NIGHT CAP. PUMP NO FLUID AS TO NOT LOAD HOLE IN VERY COLD WEATHER
	13:30 - 14:30	1.00	ABANDP	30	I	P		WINTERIZE EQUIP TAKING EXTRA TIME DUE TO EXTREME COLD WEATHER
	14:30 - 15:00	0.50	ABANDP	30	G	P		CREW TO YARD
1/5/2017	6:00 - 6:30	0.50	ABANDP	30	G	P		CREW TO LOC
	6:30 - 7:00	0.50	ABANDP	48	B	P		HELD SAFETY MEETING START EQUIP
	7:00 - 11:00	4.00	ABANDP	31	H	P		C&CH WHILE WAITING ON CEMENT TO ARRIVE, SCHEDULED TIME WAS 8AM
	7:00 - 7:00	0.00	ABANDP	52	I	P		TBG=5 SC=5 OPEN TO TANKS
	11:00 - 13:00	2.00	ABANDP	51	D	P		MIRU PUMP STUB PLUG AS FOLLOWS: 15 BBLS CHEM WASH, 399 SKS (82 BBLS) 15.8 PPG, 1.16 YIELD, "G" CEMENT, 1 BBL FRESH WATER. AIR=2 BPM, AIP=300 PSI, ISIP=0
	13:00 - 13:45	0.75	ABANDP	31	I	P		TOOH W/ 38 JNTS LAYING DOWN ON TRAILER LEAVING EOT @ 120'
	13:45 - 14:15	0.50	ABANDP	31	H	P		RU SLB PUMP 20 BBLS CLEAN WATER TO CLEAN TBG/CSG
	14:15 - 14:30	0.25	ABANDP	31	I	P		TOOH W/ REMAINING TBG LAYING DOWN ON TRAILER. SECURE WELL W/ SHUT AND LOCKED BLIND RAMS
	14:30 - 15:30	1.00	ABANDP	30	I	P		WINTERIZE PUMP AND LINES
	15:30 - 16:00	0.50	ABANDP	30	G	P		CREW TO YARD
1/9/2017	6:00 - 6:30	0.50	ABANDP	30	G	P		CREW TO LOC
	6:30 - 7:00	0.50	ABANDP	48	B	P		HELD SAFETY MEETING START EQUIP
	7:00 - 7:15	0.25	ABANDP	34	G	P		RU ELINE PU 2.875" GAUGE RING RIH TAG TOC @ 176" POOH W/ TOOLS
	7:00 - 7:00	0.00	ABANDP	52	I	P		SC=50 OPEN TO ATMOS BLEW DOWN IN 2 MIN NO SIGNS OF GAS PRESENT AFTER BLOW DOWN
	7:15 - 8:15	1.00	ABANDP	30	J	P		NDBOP ND P&A SPOOL ND COMPANION FLANGE
	8:15 - 8:30	0.25	ABANDP	34	I	P		PU RIH SET 8.625" CIBP @ 75' TO AVOID A COLLAR (8' ABOVE NEAREST COLLAR) POOH W/ SETTING TOOL
	8:30 - 10:00	1.50	ABANDP	30	C	P		SECURE WELL RD CLEAN LOC MOVE OFF
1/26/2017	9:00 - 10:00	1.00	ABANDP	52		P		pressure tested CIBP, surface casing to 500 psi
	10:00 - 11:00	1.00	ABANDP	53	B	P		dug up surface casing
	11:00 - 12:00	1.00	ABANDP	53	C	P		cut casing 6' below GL, tagged @ 74'
	12:00 - 13:00	1.00	ABANDP	53	B	P		filled casing stub with 41 bags 5000 psi cement

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	13:00 - 14:00	1.00	ABANDP	53	A	P		capped casing with a metal plate containing well info
	14:00 - 15:00	1.00	ABANDP	53	B	P		backfilled
	13:30 - 13:30	0.00	ABANDP	50		P		P&A'd OFFLINE. NB/CD/J.