

PERFORM
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DRILLREP

PERFORM WITH **AIQ**

THE CHALLENGE



The preparation of DDR (Daily Drilling Reports) has historically been conducted manually by a Drilling Supervisor or his equivalent, which can be a time-consuming and laborious process, and is also subject to human error.

The narrative report, which comprises 350+ codes and sub-codes for specific activities included within the Drilling Operation Coding System, can be difficult to manage, leading to inaccurate or wrong information being gathered.

DDR sample

Activity Summary		Drill to 6148'. Circ. Sweep, Wiper tripto 3530', Adjustbrakes. TIH. Drill to 6148'. Change seat in mud pump #1. Drill to 7211.			
Activity Planned		Drill to 1800hrs. CBU. Wiper trip to 6022', Drilling head.			
FROM	TO	HRS	ACTIVITY	DEPTH	HOURLY COMMENTS
6:00	8:00	2:00	Drilling	6,148'	Drilling and sliding to stay on directional plan from 6022 ft. to 6148 ft. For 126'ft. 165 SPM, 700 GPM, 3000 PSI, 70 RPM, 1200-3500 ft/lbs torque.
8:00	9:00	1:00	Circulating	6,148'	Drilling and sliding to stay on directional plan from 6022 ft. to 6148 ft. For 126'ft. 165 SPM, 700 GPM, 3000 PSI, 70 RPM, 1200-3500 ft/lbs torque.
9:00	10:30	1:50	Tripping	6,148'	Pump slug, short trip from 6148 ft. tp 3430 ft. 30-40k drag in sports. Work back down through spots and excessive drag gone.
10:30	11:00	0:50	Rig Service	6,148'	Adjust brakes on drawworks, rig service.
11:00	12:30	1:50	Tripping	6,148'	Trip back in hole from 3430 ft to 6148 ft. Hole taking proper fillups.
12:30	14:00	1:50	Drilling	6,294'	Drilling and sliding to stay on directional plan from 6148 ft. to 6294 ft. For 146' ft. 165 SPM, 691 GPM, 3200 PSI, 70 RPM, 2000-5500 ft/lbs torque. Max gas after short trip 70 units.
14:00	15:30	1:50	Rig Repairs	6,294'	Change seat and valve on #1 mud pump. Discharge valve between pumps was leaking preventing pumping with #2 mud pump. Changed paddle and rubber on discharge valve.
	6:00	14:50	Drilling	7,211'	Drilling and sliding to stay on directional plan from 6294 ft. to 7211 ft. For 917' ft. 165 SPM, 691 GPM, 3200 PSI, 70 RPM, 2000-5500 ft/lbs torque.
Total Hrs: 24.00		Job Total Hrs: 408.00			



THE SOLUTION



DRILLREP is a web-based application that helps improve the quality of DDR reporting using deep AI and Machine Learning technology to scan the reported data and automatically analyze the written description of drilling activities. It then suggests code and sub-code allocations, based on analysis of accurate historical DDR data.

With DDRs requiring completion daily, DrillRep drastically improves the ease and accuracy of reporting, simplifying the process and turning the report into a dynamic tool that can help drive greater operational efficiencies.



AI-DDR: AN ONLINE TOOL TO IMPROVE THE QUALITY OF DDR REPORTING USING DEEP LEARNING TECHNOLOGY

Report date	From	To	Duration (hr)	Code	Subcode	Type	Operation	Depth from (ft)	Depth to (ft)	Phase
11/05/2024	0900	0900	7	DRILL	RSS	3	Drill 12 1/4" intermediate hole from 14,552 to 14,600. *Take R/V & S/D reading every 5 stands drilled * Drill with controlled ROP 10-18 ft/hr for directional control and AC point. Drilling parameters: FR: 1,800 GPM; SPP: 5,350 - 5,450 PSI; MHI Input: 12.5/13.0 PPG; ECD: 10-11.2 PPG; WOB: 0 - 10 lbs; RPM: 320; ON BTH TQ: 30-30K ft-lbs; OFF BTH TQ: 4-10K ft-lbs; PVA: 365K; S/G: 175K; RDT: 285K; ON BTH ROP: 30 - 40 ft/hr Average ROP: 47 ft/hr Losses: nil.	14552	14600	13 1/4
11/05/2024	0900	0930	1.5	CSL	RUN/CSL	3	CONTINUED DRILLING 5 1/4" 470, 1-80 TSH BLUE CSG FROM 1099 FT TO 400 FT (W/ JTS OUT OF 222 JTS 4 5/8" CSG). AT DEPTH 400 FT ATTEMPTED TWICE TO BREAK CORE - OBSERVED SUDDEN INCREASE IN PUMP PRESSURE TO 750 PSI WITH NO RETURNS * PREVIOUS CIRCULATION PRESSURE 5 BPH / 50 PSI * FILLED EACH JET OF CSG WHILE ROH OFFLINE * CEMENTER PREPARED 150 BBL 12.3 PPG 55ALBOND SPACER	-	-	13 1/4
11/05/2024	0900	0900	8	WAIT	WAIT/CSL	3	WAIT ON ACID BOAT ON NON OPERATION WEATHER HIGH WIND MEANWHILE MONITOR WHP FOR PRESSURE BUILD UP. TIME WHP_PSI: 3000 L275 PSI Q200 L280 PSI Q450 1280 PSI Q600 1290 PSI Q800 1300 PSI	-	-	RLD
11/05/2024	0900	0930	0.5	SAFE	PZIM	3	HP196	-	-	8
11/05/2024	0900	0900	1	ST	WU/SDB	3	L/D W/RO SPIN EXT BHA, R/D INJECTOR HEAD, SET BACK ON HORN DECK & SECURE SAME.	-	-	RLD
11/05/2024	0900	0915	0.25	SAFE	PZIM	3	Hold pre job safety meeting with all involved personnel to discuss the upcoming operation (Shift handover).	-	-	8 1/2
11/05/2024	0900	0930	0.5	SAFE	PZIM	3	R23H WITH ENGAGING CREW & HANDOVER BETWEEN BOTH CREWS	-	-	CDMP
11/05/2024	0900	1030	1.5	CH	RUN/CL	3	W/196 IN ROW 4-1/2" LBL Upper Completion. RECD - 1500 Wtu W/U & R/B 4-1/2" Closed excelsior flow Assy with 4 1/2" LBL. Lower Lower Completion (CLM) 4-1/2" (14" BLU) from 100 ft to 6,700 ft. * Drilled all Livers with 3.75" Drill before RES. * Run: 12 / 13 = 1-0" DUAL MWD-CLOSED END, 4 1/2" 15.5K TSH BLUE BOX WITH 5 FT PUP-JOB; 4-1/2" 15.5K TSH BLUE, L-80 ** Run: 59 / 60 jts of 4-1/2" 15.5K, TSH BLUE, L-80, LBL, 4 AXM LBL. ** Run: 45 / 50 jts of 4-1/2" 15.5K, TSH BLUE, L-80, LBL, 2 S 4000 LBL. ** Run: 47 / 60 jts of 4-1/2" 15.5K, TSH BLUE, L-80, Blank Livel. ** Run: 15 / 21 of Oil Well packer (3.8K, L-80, TSH Blue). ** Used Safety clamp for first 30 joints. ** Optimum MWD Torque used for 4 1/2" Livel (3.5K)-80 TSH BLUE, 3.8K-ft.	-	-	CDMP
11/05/2024	0900	0900	1	CSL	CR/CSL	3	Cont circulating out H ₂ O @ 5 BPH, 740 Psi.	-	-	8 1/2
11/05/2024	0900	0930	0.5	DRILL	RSS/P	3	Back back one stand 8 1/2" R/P in derrick - R/U surface line to Solar CRT unit and press. tested with 3000 psi.	-	-	8
11/05/2024	0900	0930	0.5	ROP	PLUG/ST	3	R/U and M/U 3-1/2" Venturo tubing ROP test assembly. R/B and set tool plug across wellhead.	-	-	CDMP
11/05/2024	0900	1000	1.8	DRILL	RSS	3	Drilled 12 1/4" hole using HLB 12 1/4" RSS BHA F/ 4,050 Ft to 5,210 Ft. Drilling parameters: * MWD: 5-30 kts - Flow Rate: 1,200 GPM - Rotation: 380 RPM - Drift: BTH Press. = 1,180 psi - TQ on BTH = 10-15 Kft-lbs - TQ off BTH = 0-10 Kft-lbs - String R/U wt = 240 Klbs, S/G wt = 200 Klbs & RDT wt = 220 Klbs - Muc wt. Input = 10.8 ppg - Started to observe DM Losses with 5-6 BPH @ 4,875 Ft, increased to 10-15 BPH F/ 4,884 Ft. - Control ROP @ 60-126 FPM to control ECD @ 11.2 PPG.	4155	5300	13 1/4
11/05/2024	0900	0900	6	HL WAIT	CL/VEVL WCD	3	waiting for daylight for critical lifting operation.	-	-	RLD
11/05/2024	0900	0900	1	LOG	TR/LOG	3	R/ = IDS WL, CH, (SRT) VDL-GA-CO-CPRO-TRACTOR) on Tractor from 11,780 ft to max 12,900 ft depth @ 12,920 ft. -- Running speed: 28 ft/min. -- Perform pull test every 3000 ft. -- Turn Gyro tool every 25 deg inclination and 25 deg Azim. ft change or every 2000 ft. -- Record Repeat Pass for 300 ft from above tracking depth.	-	-	8 1/2
11/05/2024	0900	0930	1.5	CSL	RUN/CSL	3	CONTINUED DRILLING 5 1/4" 470, 1-80 TSH BLUE CSG FROM 1099 FT TO 400 FT (W/ JTS OUT OF 222 JTS 4 5/8" CSG). AT DEPTH 400 FT ATTEMPTED TWICE TO BREAK CORE - OBSERVED SUDDEN INCREASE IN PUMP PRESSURE TO 750 PSI WITH NO RETURNS * PREVIOUS CIRCULATION PRESSURE 5 BPH / 50 PSI * FILLED EACH JET OF CSG WHILE ROH OFFLINE * CEMENTER PREPARED 150 BBL 12.3 PPG 55ALBOND SPACER	-	-	13 1/4



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Drastically improves the ease and accuracy of reporting, creating a dynamic tool that can help drive greater operational efficiencies



ACCURACY

Increases accuracy of reporting, while simplifying the process for individuals



EFFICIENCY MAXIMIZATION

Reduces the time required for Quality Control/Quality Assurance-related activities



REDUCE OPEX COSTS

Identifies operational issues early, allowing for quicker remediation, which can reduce OPEX costs



REDUCE HUMAN ERROR

Assigns correct codes and sub-codes; reducing human error



DISCLAIMER

This booklet contains numerical data that has been sourced from our esteemed clients. It is important to note that these figures are provided in the context of their respective business operations and have been shared with us for the purpose of this booklet.

Please be aware that client-sourced data can be subject to various factors that may influence its interpretation.

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