

IADC DDR Plus™ & DDR Plus™ Schema FAQs

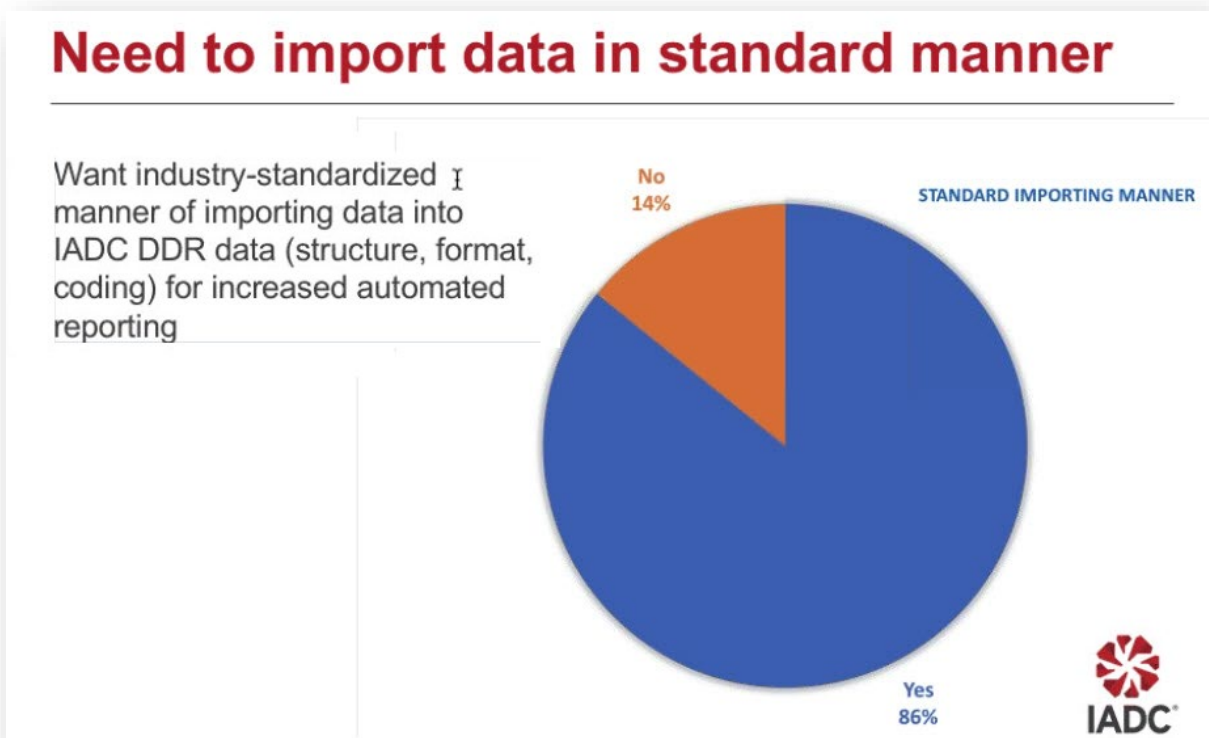
Why has the IADC Daily Drilling Report (DDR) “Tour Sheet” changed?

The drilling industry has undergone numerous developments in technology, sensor capability, and computer power, with an eye toward increased automation. The IADC DDR Plus™ is a print and electronic data collection system aimed at securing accurate and relevant drilling data that industry can use to assess performance against drilling Key Performance Indicators.

Largely unchanged for decades, IADC Members realized the report was losing relevance and utility in the 21st century digital world.

IADC Members were surveyed in early 2018 with a questionnaire to find out how they wanted the DDR improving. A total of 134 responses were received - 78 responses from 29 different drilling contractors, 21 from 17 different operators, 16 from 12 different service companies, and 3 from 3 different data management companies.

Here are some of the results from the survey:



When asked more generally “what... you would like changed on or about the IADC DDR to make it more useful for you and/or your company?”, here is a snapshot of the answers:

Old DDR		DDR Plus	
CODE	OPERATION	CODE	OPERATION
1	RIG UP AND TEAR DOWN	1	RIG UP / TEAR DOWN / MOVE
2	DRILL ACTUAL	2	DRILLING
3	REAMING	3	REAMING
4	CORING	4	CORING
5	CONDITION MUD & CIRCULATE	5	CIRCULATE & CONDITION MUD
6	TRIPS	6	TRIPS
7	LUBRICATE RIG	7	SERVICE/MAINTAIN RIG
8	REPAIR RIG	8	REPAIR RIG
9	CUT OFF DRILLING LINE	9	REPLACING DRILL LINE
10	DEVIATION SURVEY	10	DEVIATION SURVEY
11	WIRE LINE LOGS	11	WIRELINE LOGS
12	RUN CASING & CEMENT	12	RUN CASING & CEMENT
13	WAIT ON CEMENT	13	WAIT ON CEMENT
14	NIPPLE UP B.O.P.	14	RIG UP/DOWN BOP
15	TEST B.O.P.	15	TEST BOP
16	DRILL STEM TEST	16	DRILL STEM TEST
17	PLUG BACK	17	PLUG BACK
18	SQUEEZE CEMENT	18	SQUEEZE CEMENT
19	FISHING	19	FISHING
20	DIR. WORK	20	SPECIALIZED DIRECTIONAL WORK
21	RUN/RETRIEVE RISER EQUIP.	21	RUN/RETRIEVE RISER EQUIP.
22	SURFACE TESTING	22	SURFACE TESTING
23	OTHER	23	OTHER
	[unused]	24	NON-PRODUCTIVE TIME
	[unused]	25	OPERATING STATUS
	[unused]	26	SAFETY
	[unused]	27	WELL CONTROL
	[unused]	28	COILED TUBING
A	PERFORATING	29	PERFORATING
B	TUBING TRIPS	30	TUBING TRIPS
C	TREATING	31	TREATING
D	SWABBING	32	SWABBING
E	TESTING	33	TESTING
	[unused]	34	SUBSEA INSTALATIONS

2. To add granularity to the 34 Operation codes, 196 Activity, 26 Sub-activity, 200 Equipment and 26 Sub-equipment codes have been identified. [Click here](#) to view the entire matrix.

3. Minor clarifications, corrections, and additions have been made following studies of best practices by IADC members.

Do definitions exist for any of the codes?

Yes. All 34 of the main (operation) codes have been defined. [Click here](#) to view the definitions. Definitions will be developed for subcodes as time allows.

How will the new code/subcode system work?

The new code/subcode set cascades neatly to allow selection for each Operation, as represented by a base code, 1-34, the appropriate Activity, Sub-activity, piece of Equipment, and Sub-equipment. A “No Specifics” option is provided, if no selection is desired for a given subcode.

Each item within each subcode, whether for Activity, Sub-activity, Equipment, or Sub-equipment, is represented by a unique numeral. For example, the Activity “Drills” is a selection under three separate main Codes¹, and is always represented by the Activity code 23. Similarly, the Equipment “Topdrive” is always represented by the numeral 4 in each of the three main Codes in which it can be found.²

The user selects the appropriate main code, then selects from the cascades of Activity, Sub-activity, Equipment, and Sub-equipment codes, as relevant. See the example:

OPERATION CODE	OPERATION	ACTIVITY CODE	ACTIVITY	ACTIVITY SUB-CODE	SUB ACTIVITY	EQUIPMENT CODE	EQUIPMENT
6	TRIPS	30	Lay Down	24	Open Hole Unrestricted	80	BHA
6	TRIPS	42	Transfer	25	Cased Hole Restricted	81	Cement Stinger
6	TRIPS	55	Clean	26	Cased Hole Unrestricted	82	3rd Party Systems
6	TRIPS	63	Inspection			83	Well Evaluation using BHA
6	TRIPS	88	RIH			84	Well condition Check Trip
6	TRIPS	90	POOH			206	Fluid Actions
6	TRIPS	100	Pump			207	Surface Equipment
6	TRIPS	239	Fill			230	Offline Pipe-Handling Equipment
6	TRIPS	252	Wiper Trip			262	Hole
6	TRIPS	253	Wash In			276	Slug
6	TRIPS	255	Compensate through BOP			279	String
6	TRIPS	256	Evaluate			290	Well
6	TRIPS	257	Nipple Up			293	Reaming tool
6	TRIPS	258	Nipple Down			294	Coring tool
6	TRIPS					295	Scientific tool

Main code
(Operation)

Activity

Sub-activity

Equipment
Note: Sub-equipment is not shown, but available for many main codes

6.88.24.80 = Trips, RIH, Open Hole Unrestricted, BHA

How were the subcodes for Activity and Equipment created?

Numerous IADC contractor members, data-acquisition companies, and the Canadian Association of Oilwell Drillers generously contributed information for the granular cascading subcodes for Activities and for Equipment. The IADC DCS Subcommittee added additional subcodes.

Why does the IADC DDR Plus™ now have a digital schema?

Requested by IADC Members, the DDR Plus™ schema allows the DDR Plus™ data to be easily and logically stored, transferred and analyzed.

How does the IADC DDR Plus™ schema work?

Each piece of information (letters, numbers, words) entered into the DDR Plus™ will have a place in the DDR Plus schema.

What is the IADC DDR Plus™ schema?

The DDR Plus™ schema is the standardized digital description of the DDR Plus™. It is a human-readable and machine-readable description of the data that goes into the DDR Plus™.

¹ Activity code 23 “Drills” is found under Code 2, “Drilling;” 15, “Test BOP;” and 26, “Safety.”

² Equipment sub-code 4 “Topdrive” is included under the main codes 1, “Rig up/Tear down/ Move;” 2, “Drilling;” and 8, “Rig Repair.”

Can the schema be used on its own?

The schema is designed to be used in the background, behind a user interface (UI) built by software developers.

What code is the schema based on?

The structure of version 1.0 of the DDR Plus™ schema is based on WITSML 1.4.1.1, with additional objects specifically for the DDR Plus™.

What is WITSML?

Well Information Transfer Standard Markup Language (WITSML) is a data transfer protocol (analogous to HTTP routinely used to send information between machines/electronic devices, via the Internet) specifically developed for the upstream oil and gas industry. Developed by Energistics (see below), it sets out a standard way to send drilling data between machines/electronic devices.

Who are Energistics?

Energistics is a global, nonprofit, membership consortium focused on developing open data exchange standards in the upstream oil and gas industry. They have served the industry for more than 25 years.

Who is this guide for?

This guide is for anyone wishing to find out more about the transfer of drilling data, but specifically it is for software developers looking to integrate the DDR Plus into new and existing software solutions that will generate the DRR Plus, import or export drilling data related to the DDR Plus.

Who made the digital schema?

Independent Data Services (IDS) – an international organization with over two decades of DDR-focused experience, producing and transferring data from DDRs - was contracted to design and build the digital version of the DDR Plus™.

Can I get more information on the IADC DDR Plus™ schema?

Yes! An operating guide with links to example XML code is available [here](#).

What if I see issues with the DDR Plus™ schema or am struggling to implement it?

Please email IADCsupport@idsdatanet.com

Will the schema ever be updated?

Yes. Based on feedback from IADC Members, the schema will be updated, and new versions published by the IADC.

How can I provide input on DDR Plus™?

Send any feedback or input to DDR_Plus@iadc.org or access the form at ddrplus.iadc.org.